Resultatives

A view from Oceanic verb serialization

Dissertation
zur Erlangung des akademischen Grades

Doktor der Philosophie (Dr. phil.)

eingereicht an der Sprach- und literaturwissenschaftlichen
Fakultät der Humboldt-Universität zu Berlin

von

Jens Philipp Hopperdietzel, M.A.

Disputation: 02.11.2020

Prof. Dr.-Ing. Dr. Sabine Kunst Präsidentin der Humboldt-Universität zu Berlin	Prof. Dr. Stefan Kipf Dekan der Sprach- und literatur- wissenschaftlichen Fakultät

Gutachterinnen und Gutachter:

1. Prof. Dr. Dr. h.c. Artemis Alexiadou (Humboldt-Universität zu Berlin)
2. Prof. Dr. Malte Zimmermann (Universität Potsdam)
3. Prof. Dr. Enoch Oladé Aboh (Universiteit van Amsterdam)

Summary

This dissertation approaches the event and argument structure of resultative construction (e.g., *Peter wiped the table clean*) from the perspective of two understudied and endangered Oceanic languages, Daakaka and Samoan, in which both the manner and result components are realized by verbal predicates, i.e. resultative serial verb constructions (RSVCs). This observation contrasts with non-serializing languages, such as English, in which only one of the two meaning components is expressed by the main verb. By examining the morphosyntactic and semantic properties of two types of resultative constructions, namely *resultative secondary predication* and *means constructions*, I develop a novel configurational analysis within the generative framework of Distributed Morphology that models cross-linguistic variation in terms of the morphosyntactic size and the semantic composition of the respective meaning components and their interaction with idiosyncratic requirements on roots and argument structure. Based on original fieldwork, I demonstrate that despite the superficial differences in categorial status, Oceanic RSVCs are an instance of the *means* construction, in which the manner verb directly adjoins to a causative verb modifying the underspecified causing event entailed in the event structure of the causative predicate. Consequently, serializing and non-serializing languages do not vary significantly in their morphosyntactic and semantic composition with further implications for the typology of resultatives in the world's languages.

Zusammenfassung

Diese Dissertation untersucht die Argument- und Ereignisstruktur von Resultativkonstruktion (z.B., *Peter wischte den Tisch sauber.*) aus der Perspektive zweier serialisierender, wenig untersuchter und bedrohter Ozeanischen Sprachen, Daakaka und Samoanisch, in welchen sowohl die *Manner*- als auch die *Result*-Bedeutungskomponente durch verbale Prädikate ausgedrückt wird. Diese Beobachtung steht im Kontrast zu nicht-serialisierenden Sprachen, wie dem Englischem, in welchen nur einer der beiden Bedeutungskomponenten durch das Hauptverb ausgedrückt wird. Im Zuge einer Untersuchung der morphosyntaktischen semantischen Eigenschaften zweier Typen von Resultativkonstruktionen, resultative Sekundärprädikation und die *means*-Konstruktion, entwickelt diese Arbeit einen neuen konfigurationellen Ansatz innerhalb der Distributed Morphology, in welchem sprachübergreifende Variation als Interaktion von morphosyntaktischer und semantischer Komposition der jeweiligen Bedeutungskomponenten in Abhängigkeit von sprachspezifischen Restriktionen auf Wurzelbedeutung und Argumentstruktur beschrieben werden kann. Mit Hilfe eigener Feldforschung zeige ich, dass trotz der oberflächlichen Unterschiede zwischen serialisierenden und nicht-serialisierenden Sprachen Ozeanische Resultativkonstruktionen die zugrundeliegende Struktur der *means*-Konstruktionen aufweisen, in welchen das Mannerverb an das kausative Hauptverb adjungiert wird und das darin enthaltende, unterspezifizierte kausative Ereignis spezifiziert. Folglich unterscheiden sich beide Sprachtypen nicht signifikant in ihrer morphosyntaktischen und semantischen Komposition mit weitreichenden Implikationen für eine sprachübergreifende Typologie von Resultativkonstruktionen.

Acknowledgements

This dissertation would not have been possible without the contribution of quite a number of people from all over the world. First and foremost, I am deeply indebted to Artemis Alexiadou for her constant trust and support, patience and guidance, whenever I was in need. Thank you, especially, for the opportunity to explore language in the field, which made this journey a pleasant, challenging and intellectually rewarding experience. It was, and of course still is, a pleasure to learn from and work with you.

I am extremely grateful to Malte Zimmermann, who joined my team of supervisors in the course of this project. Thank you for all the lunch and coffee meetings, brainstorming about serial verb constructions and turning my phobia of event semantics into a deep interest. I would also like to thank Enoch Aboh, for completing my supervision and reminding me to be precise in my argumentation. I was extremely fortunate to have had the opportunity to learn from such an exceptional group of supervisors.

I would like to extend a sincere thanks to the other members of my defense committee, Roland Meyer, Manfred Krifka, Florian Schäfer, Fabienne Martin and Odelia Ahdout. I am particularly grateful to Manfred Krifka, who I met during my first class at the Humboldt University, and who accompanied my long way from the early steps, over fieldwork experiences on Ambrym to my research stay at the Leibniz-ZAS. As part of the RUESHEL group, Florian Schäfer's and Fabienne Martin's (daily) input was highly influential on the outcome of this thesis, as a lot of my knowledge on morphosyntax and lexical semantics is based on what I have learned from them. Thank you for being patient and supportive, especially in times, when I was not able to express my ideas clearly.

Apart from my supervisors and committee, a number of people have greatly influenced my journey over the last years, of which some need to be highlighted. I am highly indebted to Kilu von Prince, who got me interested in typological research the first time I visited her class on possessives, and finally became my Master's supervisor on a project of polysynthetic languages. Without her, I would not have been able to write this thesis as she not only introduced me into the joys of linguistic fieldwork but also enabled my work on Daakaka by generously providing her data and contacts to the speakers. Thank you for your enthusiasm, motivation and support. I am also deeply grateful to my former office mate, Itamar Kastner, who was always ready to discuss even my most immature ideas with genuine interest. Thank you, especially, for your encouraging and inspiring

feedback, as well as for being an academic mentor. From Tonjes Veenstra, with whom I have organized my first conference, I have learned the ABC of verb serialization, primarily in the setting of Italian cafés all over Berlin. Thank you for sharing your experience, knowledge and (almost forgotten) resources with me! I would also like to thank Vera Hohaus for friendship, support and sharing the fascination for the Samoan language and culture. Thank you for your valuable advice to carry out fieldwork in Hawai'i and providing additional elicitations on Samoan.

By studying in Berlin for almost seven years, I was able to work with several people who have contributed to this dissertation. Firstly, I would like to thank the members of the RUESHEL group, especially, Despina Oikonomou and Giorgos Spathas for always being supportive and challenging in such a pleasant way, as well as Meg Grant, Dimitra Lazaridou-Chatzigoga and Gulsen Yilmaz. A special thanks goes to my fellow PhD students Benjamin Lowell Sluckin, Odelia Ahdout, Livia Sommer, Nils Hirsch and Anastasia Paspali, as well as Christina Grey, Vicky Rizou, Ana Krajinovic, Nicola Klingler and Nico Lehman. Thank you for your company, support, understanding and friendship. Over the years, I was able to benefit from valuable discussions with exceptional researchers, who visited our group. Among them Byron Ahn, Ragnhild Eik, Emily Hanink, Dmitry Ganenkov, Berit Gehrke, Gianina Iordăchioaia and Louise McNally. I would also take the opportunity to thank Onur Öszoy and Daniil Bondarenko for helping me in various ways. Many thanks to David Green and Mary Quigley for proofreading this thesis.

For the last six month, I was honored to work at the Leibniz-Centre for General Linguistics, where I enjoyed the stimulating company of Christian Döhler, Nicola Gotzner, André Meinunger, Tom McFadden, Zorica Puškar-Gallien, Ludger Paschen, Frank Seifart and Karolina Zuchewicz. Thank you for the warm welcome at ZAS, and the daily Teams meetings that provided desperately needed company in these isolating times. I would also like to take the opportunity to thank my former teachers at the Humboldt University of Berlin and the University of Bonn who introduced me to the fascinating world of linguistics: Lars Zeige, who became a mentor and friend, Andrew Murphy, Karin Donhauser, Marco Coniglio, Berry Claus, Manfred Bierwisch, and Carmen Blum, as well as Jan Seifert and Markus Tönjes.

This research would not have been possible without the native speakers involved in it. First, and foremost, I would like to express my enormous gratitude to Chief Filip Talevu, his wife Rena and his family, who invited me to stay with their family in Emyotungan on Ambrym island. He and his family provided me a second home far away from

Berlin, to which I was fortunate to return to for a second stay. Especially, celebrating Christmas and New Year's with you will stay with me for my whole life. I am deeply indebted to all speakers, who shared their time and language with me. *Tankiu tumas! Sipa ten!* †Jonas Bong, who left us too early, Sandei Bong, Dominique Bong, Martha Bong, Longne Bong, Massing Bong, Emil Bong, Jip Bae Wilpen, Angela Wilpen, Augustino Merane and Donatien Merane, as well as Steven Bong, Kenzy Bong and †Bae Luk. Special thanks to Tiobang Massing for your tireless motivation to show me the beauty of your language. At my second field trip, I was awarded a visiting scholar by the Pacific Language Unit at the University of the South Pacific. I would like to thank Robert Early for hosting me and teaching me Bislama. Thank you also to Sarah Doyle, Tanran and Ioka for friendship, as well as Ian and Oli for making me feel like home during my stays in Port Vila.

Spending a month at the Samoan Program of University of Hawai'i at Manoa gave me the wonderful opportunity to not only work with Samoan native speakers, but also to interact with other researchers working on Oceanic languages. I wish to thank especially Luafata Simanu-Klutz, Aumuagoalo Ropeti Ale and Fa'afetai Lesa, as well as Tina Tauasosi-Posiulai, Rekie Ahsue, Netina Esera, John Patu and Aovai Cole for the participation in my study. *Fa'afetai lava!* My stay in Hawai'i would not have been possible without John Mayer, who invited me as a Visiting Scholar and shared his profound knowledge on the Samoan language and culture with me. Many thanks also to the Le Fetuao Samoan Language Center for giving me the opportunity to join Samoan classes. From the linguistic department, I am most grateful to James Collins who made my research stay an insightful and rewarding experience. Thank you for our challenging discussions, immense support and friendship which continues in our ongoing collaborations. I would also like to thank Robert Blust, Joel Bradshaw and Piet Lincoln for valuable comments, as well as Andrea Berez-Kroeger and the Kaipuleohone Language Archive for helping me to make my data accessible to the public.

I was also fortunate to discuss (parts of) my research with many researchers, who provided valuable feedback from which my thesis clearly benefitted. Thank you to Elena Anagnostopoulou, Shigeru Miyagawa, Jonathan Bobaljik, Terje Lohndal, Diane Massam, Rebecca Tollan, Anna Margetts, Jozina Vander Klok, Mike Franjieh, Eleanor Ridge, Giovanni Roversi, Kristine Yu, Andrew Koontz-Garboden, Elisabeth Verhoeven, Marian Klamer, Daniel Kraußе, Lisa Travis, Ileana Paul, Yuko Otsuka, Maria Kouneli, Mike Berger, Imke Driemel, Gereon Müller, Yining Nie, Jianrong Yu, Josep Ausensi, Ryan

Walter Smith, Carolin Ulmer, Gisbert Fanselow, Lauren Clemens, Dan Finer, Margit Bowler, Bryn Hauk, Marian Klamer, Michael Erlewine, Coppe van Urk, Luke Adamson, Peter Svenonius, Doreen Georgi and Dieter Wunderlich, as well as the audiences and reviewers of various conferences.

While writing a dissertation can be isolating at times, it was important to be surrounded by caring friends that reminded me that there is more to live for. Special thanks to Tanja Scheikert, Philipp Arnold, Florian Dietz, Wiebke Wesselmann, Nele Schallenberg, Lilli Lorenz, Lena Mayer, Benjamin Surangkanjanajai and Hanne Müller, Stefan Hennicke and Nadine Riß, Nico Heppner and Marina Farny, as well as Alexander Hetterle, Patrick Stanuch, Dennis Michels, Matthias Kurth, Simon Waskow and Mirjam Berg, Tilman Singer, Teresa Zoller, Manuel Tran and Daniel Babik.

Finally, I would like to thank my family. I am particularly grateful to my parents, Gudrun Schallenberg-Hopperdietzel and Jakob Hopperdietzel, for their kindness, love and unconditional support, whenever and wherever I needed it, my sister Clara Hopperdietzel and my aunt Brigitte Schallenberg. Last, but not least, thank you, Victoria Aichmayr, for being with me every second of this journey. *Danke, dass du bist!*

This work was funded by AL 554/8-1, DFG Gottfried Wilhelm Leibniz-Preis 2014 awarded to Artemis Alexiadou as part of the Research Unit on (Experimental) Syntax and Heritage Languages (RUESHeL) and the German Academic Exchange Service (DAAD).

List of Contents

List of Tables

List of Figures

Abbreviations

1	first person
2	second person
3	third person
ABS	absolutive
ACC	accusative
ADJ	adjectival suffix
ADV	adverbial
ALT	alternative marker
ANAPH	anaphoric pronoun
ANTICAUS	anticausative
AO	aorist aspect
APPL	applicative
ART	article
ASR	assertive marker
ATTR	attributive linker
C	connective particle
CAUS	causative
CL	clitic pronoun
CL1/7	noun class 1/7
CLF	classifier
COLL	collective
COMP	complementizer
COMPL	completive
CONJ	conjunctor
CONST	construct suffix
COORD	coordinator
COP	copula
DAT	dative
DECL	declarative
DEF	definite
DEM	demonstrative
DET	determiner
DIR	directional
DIST	distal mood
DU	dual
DUR	durative aspect
EC	existential closure
EMPH	emphatic particle

ERG	ergative
ES	ergativizing suffix
FAC	factive tense
FOC	focus marker
FUT	future tense
GEN	genitive
GENR	generic tense
HAB	habitual aspect
INCH	inchoative aspect
INCL	inclusive
IND	indicative mood
INTR	intransitive
IPFV	imperfective aspect
IRR	irrealis mood
ITR	intransitive marker
LK	linker
LOC	locative
MASC	masculine
MIN	minimal number
NACT	non-active
NEG	negation, negative
NMLZ	nominalizer
NOM	nominative
NONSPEC	non-specific
NPN	non-possessed noun marker
NSPEC	non-specific
OBJ	object
OBL	oblique
PASS	passive
PC	paucal
PFV	perfective aspect
PL	plural
POSS	possessive
POT	potentials mood
PRC	precautionary mood
PRF	perfect aspect
PROG	progressive aspect
PROSP	prospective aspect
PRON	personal pronoun
PRS	present tense
PST	past tense

REAL	realis mood
RED	reduplication
RSMP	resumptive pronoun
SET2	set2 proclitic
SFX	suffix
SG	singular
SPEC	specific
STAT	stativizer
SUBJ	subject
SUBORD	subordinator
TEL	telic aspect marker
TR	transitive marker
UNSPEC	unspecific, indefinite article
USIT	usitative tense
VOC	vocative tense

Chapter 1: Introduction

Resultative constructions are a form of complex predication in which a manner-denoting predicate and result-denoting predicate appear in causative relation within a monoclausal structure. A prototypical example of a resultative construction is resultative secondary predication in languages like English (Embick 2004, Simpson 1983, Halliday 1967 inter alia). In English, a manner verb functions as the main predicate of the clause that denotes an action causing a patient to undergo a change-of-state, with the result state named by a stative secondary predicate. In English, the secondary predicate is realized by a non-verbal predicate, e.g. by an adjective (Larson 1991).

(1) a. *Peter **hammered** the metal **flat**.*
b. *Mary **pushed** the door **open**.*
c. *The child **wiped** the table **clean**.*

The investigation of the morphosyntactic and semantic composition of the two predicates within resultative secondary predicates has produced a vast amount of literature over the last 50 years. Although individual approaches can differ significantly in how they model the internal organization of the complex predicate, there is growing consensus that secondary predicates are event arguments of the main predicate (see Beavers 2012 for a detailed overview of the literature on resultative secondary predication).

In addition to resultative secondary predication, resultative meaning can also be expressed by the *means* construction (Sæbø 2016, Solstad 2006, Bennet 1994 among others). Here, the main predicate of the clause is a causative verb that by itself expresses a causative relation between an underspecified event and a state that is denoted by the root. The manner predicate is realized as an adjunct to the causative predicate modifying the underspecified causing event entailed by the causative predicate, e.g. via a manner *by*-phrase in English.

(2) a. *Peter **flattened** the metal **by hammering it.***
b. *Mary **opened** the door **by pushing it.***
c. *The child **cleaned** the table **by wiping it.***

Therefore, the two types of resultative constructions differ significantly according to the status of the manner and result denoting predicate. In resultative secondary predication, the manner verb is the main predicate of the clause, taking the stative result predicate as

an argument in a causative relation. In contrast, in the means constructions the causative predicate is the main predicate of the clause, with the manner predicate operating as an adjoined event modifier.

Cross-linguistically, it has been shown that languages split according to the type of construction in which resultative meaning is predominantly expressed (Folli & Harley 2019, Mateu & Acedo-Matellan 2015, Talmy 2000, 1991). While *satellite*-framed languages like English prefer resultative secondary predication, *verb*-framed languages like Spanish make use of the means construction. In fact, resultative secondary predication is often ungrammatical in verb-framed languages.

(3) a. *María* ***aplanó*** *el metal* ***martilleándolo***. SPANISH
Maria flatten the metal hammering
'Maria flattened the metal by hammering it.'

b. * *María* ***martilleó*** *el metal* ***plano***. SPANISH
Maria hammered the metal flat
Intended: 'Maria hammered the metal flat.' (Mateu 2012a: 258)

However, the development of this typology has been based primarily on languages that only allow a single verbal predicate per clause. In these languages, the secondary predicate or the means adjunct must be realized by a non-verbal constituent. This contrasts with languages that exhibit verb serialization, in which more than one verb can appear in a monoclausal environment (Aikhenvald 2018, Veenstra & Muysken 2017, Haspelmath 2016). While some authors have suggested that serializing languages form a distinct class of *equipollent*-framed languages (Ameka & Essegbey 2013, Slobin 2004, Zlatev & Yangklang 2004), there is a growing consensus that serializing languages do not differ substantially from non-serializing languages.

On the one hand, resultative serial verb constructions (RSVCs), in which the result state is denoted by a stative verb, have been shown to resemble resultative secondary predication. Therefore, the major difference between non-serializing languages like English, and serializing languages like Édò, Lao or Mandarin is the categorial type of the secondary predicate (Stewart 2001, Cole 2016, Lin 2004).

(4) a. *Èsósà* ***kòkó*** *àdésúwà* ***mòsé***. ÉDÒ
Esosa raise Adesuwa be.beautiful
'Esosa raised Adesuwa to be beautiful.' (Stewart 2001: 15)

b. *Candii*$_3$ ***liit***$_4$ *sùa*$_5$ ***liap***$_4$. LAO
Jandee iron shirt smooth
'Jandee ironed the shirt smooth. (Cole 2016: 51)

c. *Li*$_3$*si*$_3$ ***ca***$_1$***-gan***$_1$***-le***$_5$ *zhou*$_1$*zi*$_5$. MANDARIN
Lisi wipe-dry-PRF table
'Lisi wiped the table dry.' (Lin 2004: 91)

Whereas it is often implied that RSVCs instantiate resultative secondary predication across serializing languages (Lambert-Brétière 2009, Collins 2002, 1997, Larson 1991), recent studies on RSVCs in languages such as Uyghur, Korean and Japanese suggest that serializing languages show the same split as non-serializing languages (Sugar 2019, Ko & Sohn 2015, Tomioka 2006). RSVCs in these languages resemble verb-framed languages, in that a causative verb is the main predicate of the clause, with the manner verb structurally adjoined to it.

(5) a. *Ahmat* *mital-ni* ***uru-ip*** ***tüzle-iwet-di-ø***. UYGHUR
Ahmat.NOM metal-ACC hammer-LK flatten-COMPL-PST-3SG
'Ahmat flattened the metal by pounding it.' (Sugar 2019: 14)

b. *John-i* *kaymi-lul* ***palp-a*** ***cwuk-i-ess-ta*** KOREAN
John-NOM ant-ACC trample-LK die-CAUS-PST-DECL
'John trampled an ant to death' (Ko & Sohn 2015: 6)

c *Taro-ga* *isu-o* ***osi-taosi****-ta.* JAPANESE
Taro-NOM chair-ACC push-topple-PST
'Taro toppled the chair by pushing it.' (Tomioka 2006: 3)

Even though RSVCs are well-established phenomena in many serializating languages, most descriptions do not include a substantial analysis of the morphosyntactic and semantic composition of the two predicates. Therefore, our knowledge about the event and argument structure properties of RSVCs, and resultatives more generally, is confined to a very small set of languages.

In addition, comparative studies have emphasized that the argument and event structure of resultative complex predication is highly influenced by the individual predicates that enter a resultative construction (Iwata 2020, Williams 2014, 2012). On the one hand, this relates to the hypothesis of manner/result complementarity, which states that the manner and result meaning components are in complementary distribution, i.e. a single root denotes either manner or result, but not both at the same time (Beavers & Koontz-

Garboden 2012, Rappaport Hovav & Levin 2010). Therefore, resultative semantics are expected to be denoted solely by the composition of manner and result predicates in resultative construction. While the general intuition of the manner/result complementarity seems to hold cross-linguistically, manner and result verbs show significant variation with respect to their argument and event structure. For example, English manner verbs like *wash* require the presence of an agent within and outside of resultative constructions.

(6) a. *Peter washed his clothes.*
b. * *The clothes washed.*
c. * *The coat washed clean.*

In contrast, Mandarin manner verbs like *xǐ* 'wash' are not subject to such a constraint and can appear in anti-agentive, i.e. agentless, constructions. As expected, Mandarin exhibits agentless resultatives which are absent in English (Martin et al. 2020, Williams 2014).

(7) *a.* *Lùlu xǐ le nèi-jiàn yīfu,* MANDARIN
Lulu wash PFV DEM-CL coat
'Lulu washed that coat'(Martin et al. 2020: 17)

b. *Yīfu xǐ le.*
Coat wash PFV
'The coat washed.' (Martin et al. 2020: 17)

c. *Yīfu, **xǐ-gānjìng** le.*
coat wash-be.clean PFV
'The coat washed clean.'(Martin et al. 2020: 25)

Consequently, resultatives are expected to vary according to (at least) three distinct cross-linguistic parameters: (i) the relation between the manner and result predicate, i.e. argument/complementation vs. adjunct/modification, (ii) the lexical category of the respective predicates, i.e. verbal vs. nonverbal, and (iii) the idiosyncratic requirements of verb classes on argument and event structure.

In this thesis, I approach resultative constructions from the perspective of Oceanic languages, a sub-branch of the Austronesian language family spoken on the islands in the Pacific Ocean. Oceanic languages are usually spoken by small language communities, which is why they are often severely threatened by globalization and environmental changes. Due to the small size of speakers, and the geographically isolated location, Oceanic languages have only recently come into the focus of (formal) linguistic research, with the result being that many parts of the Oceanic grammar are still understudied but

carry great potential to provide novel insights in yet undetected cross-linguistic variation. This observation holds true, especially for the morphosyntactic and semantic composition of resultative complex predication (but see Bradshaw 1982 for a notable exception).

The relevance of these languages for the study of resultative meaning is that serializing Oceanic languages exhibit microvariation with respect to their morphosyntactic and semantic properties. Thus, three general sub-types of Oceanic RSVCs can be identified, based on the result denoting predicate (cf. Verkerk & Frostad 2013, Bradshaw 1982). These are: (i) Type-A-RSVCs that express the result state by a lexical causative, (ii) Type-B-RSVCs that express the result state by morphological causative predicate, and (iii) Type-C-RSVCs that express the result state by a stative predicate.

(8) a. **Type-A-RSVCs:**

Bong ma ta tiwiye lee ente. DAAKAKA

Bong REAL cut break.TR tree DEM

'Bong broke the tree by cutting it.' (von Prince 2015: 326)

b. **Type-B-RSVCs:**

Sā solo fa'a-mamā e Malia le laulau. SAMOAN

PST wipe CAUS-be.clean ERG Mary SPEC table.ABS

'Mary cleaned the table by wiping it.'

c. **Type-C-RSVCs:**

To ni-bol madamdaw no-goygoygi qetenge nan. MWOTLAP

then AO-hammer be.soft ART-roots plant ANAPH

'Then he hammered the roots soft.' (François 2004: 114)

As the analysis of the resultative complex predication requires a careful examination of the individual predicates that appear in such constructions, this thesis focuses on two case studies on Type-A-RSVCs in Daakaka and Type-B-RSVCs in Samoan, leaving Type-C-RSVCs for future research. The focus on a small set of languages allows not only a detailed investigation of language specific morphosyntactic and semantic properties that may influence resultative predication, but also a comparative view on apparent microvariation within the Oceanic language family against a controlled background.

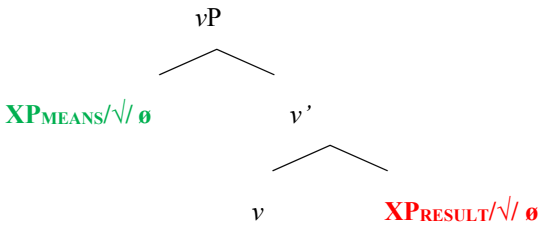
Based on original field work, I show that both Type-A- and Type-B-RSVCs are an instance of the means construction, in that the initial manner verb (V1) functions as an adjunct to the non-initial causative verb (V2), modifying the causing event entailed by the V2. Therefore, I argue that Samoan and Daakaka belong to the class of serializing verb-framed languages, such as Japanese, Korean and Uyghur. Despite the observation

that Type-A-RSVCs and Type-B-RSVCs share the basic compositional type of resultative complex predication, the case studies reveal significant variation which can be attributed to language specific morphosyntactic and semantic properties. For example, the presence, or absence, of causative morphology on the causative V2 follows from the lexical inventory of the respective language. While Samoan, via a morphosyntactic process, productively derives causative verbs from stative property concept roots like *mamā* 'be.clean', causative morphology is completely absent in Daakaka.

Furthermore, the findings of the investigation on the semantic properties of the individual predicates in Daakaka and Samoan posit more general questions on the argument and event structure of causative predication in the world's languages. On the one hand, I demonstrate that Samoan exhibits a class of causative manner verbs that primarily denote the manner of an action, while simultaneously entailing an underspecified result state. This hybrid type of manner and causative verb has not been observed outside of very specific morphosyntactic environments (Alexiadou et al. 2017 on French, Anagnostopoulou 2017 on Greek). On the other hand, I show that Daakaka causative verbs are subject to a serializing condition, in that they necessarily combine with a manner verb in Type-A-RSVCs. As such a constraint on causative verbs has not been discussed before, this observation provides further insights into the complex relation of manner and result meaning components within and outside of resultative predication. Therefore, this thesis highlights the importance of linguistic fieldwork on yet understudied languages for cross-linguistic theory-building processes that aim to account for the variation found in the world's languages.

In addition to the more descriptive part on the morphosyntax and semantics of Oceanic languages, this thesis develops a novel account of resultatives that accounts for the observed cross-linguistic variation. By adopting a syntactic approach, event composition takes place in the syntax by the interaction of eventive functional heads and lexical roots (Alexiadou et al. 2015, Marantz 2013b, Ramchand 2008). Identifying the *v*P as the relevant domain for event structure building, I propose that manner and result meaning is interpreted as configurationally relative to the position of the eventive verbalizer *v* (9) (cf. Folli & Harley 2019, Mateu & Acedo-Matellan 2015, Alexiadou et al. 2015). In this configuration, cross-linguistic variation is modelled with respect to language specific constraints on the syntactic size or category of the respective constituents, and the idiosyncratic requirement of root classes.

(9)



1.1 Theoretical background and assumptions

In its investigation of the morphosyntactic and semantic structure of resultative serial verb constructions in Oceanic languages, this thesis aims to combine the insights of formal semantic and syntactic analysis with the tools of typological and descriptive research. To this end, this section provides an overview of the basic theoretical assumptions and a brief introduction to the phenomenon of verb serialization. For the formal analysis, I utilize the framework of Distributed Morphology, a version of Generative Grammar, that integrates morphosyntactic and semantic structure building within a single generative component. The choice for this framework is influenced by the ability to model verb-internal morphosyntactic structure on a fine-grained level and its situation within a wider research program on the (de)composition of morphosyntactic and semantic structure on a (sub)lexical level. However, the generalizations drawn from the collected data are independent from the framework and are intended to be easily translated into other formal systems.

1.1.1 The framework

In this thesis, I adopt a theoretical stance that is drawn from the Minimalist Program (Chomsky 1995 et seq.) in combination with Distributed Morphology (Embick 2015, Harley & Noyer 1999, Marantz 1997, Halle & Marantz 1993 inter alia). In this tradition, abstract structure is built hierarchically from atomic building in the syntax. Once the abstract syntactic structure is sent to Spell-Out, it is interpreted at the conceptual-intentional (C-I) and articulatory-perceptual (A-P) interfaces (also: Logical Form (LF) and Phonological Form (PF)). As morphological operations are thought to take place post-syntactically at the transfer of syntactic structure to PF, there is only a single generative component which has access to relevant syntactic, phonological and semantic information provided by three distinct lists at each respective stage in the derivation.

(10) a. **The syntactic terminals:** The list containing the *Roots* and *Functional Morphemes*.

b. **The vocabulary:** The list of *Vocabulary Items*, rules that provide phonological content to abstract morphemes.

c. **The encyclopedia:** The list of special semantic information. (Embick 2015: 20)

While the syntax has access to the list of syntactic terminals, vocabulary insertion and semantic interpretation take place post-syntactically at the respective interfaces with LF and PF (Figure 1). Therefore, lexical information is distributed over the derivation.

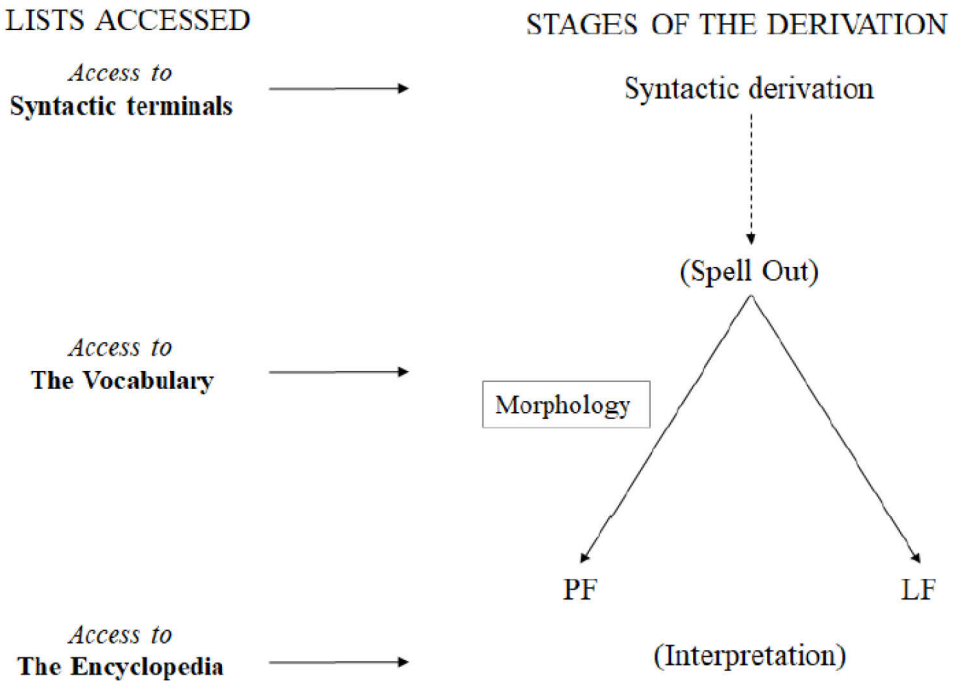
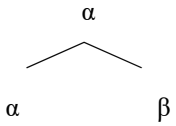


Figure 1: The grammar, with lists (Embick 2015: 20)

In the derivation, syntactic structure is built via the operations *Merge* and *Move*. *Merge* takes two syntactic elements and combines them to an unordered set {α, β}. The label of the set will be one of the two elements (here: α).

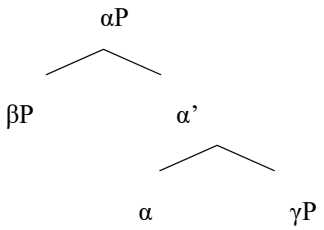
(11)



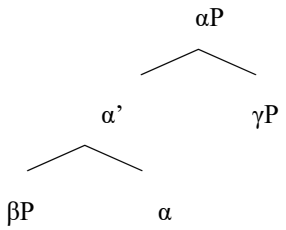
If an atomic element – a *Head* – projects its label, its maximal projection is called a phrase (here: *αP*) while its intermediate projection is marked by a bar symbol in the notation. This gives us two structural positions for arguments of the head: If an argument γP is a sister of the head α, it is the *Complement* of α; if the argument is βP is the sister of the

intermediate projection of α, it is the *Specifier* of α. In this thesis, I adopt a strict linearization in that complements merge to the right and specifiers merge to the left of the head.

(12) a.



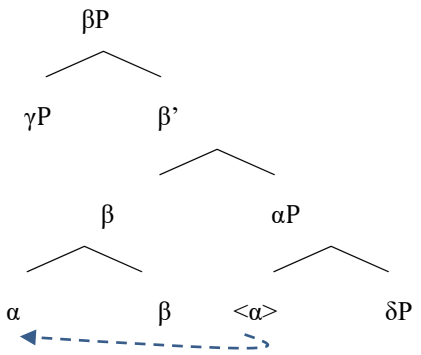
b. *



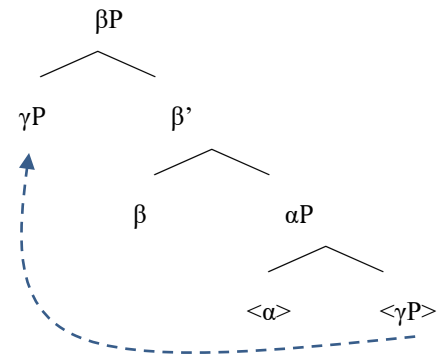
In addition, I assume that the operation *Pair Merge* is involved in adjoined structures. In contrast to *Set Merge*, Pair Merge takes two syntactic elements and creates an ordered set <α, β> where α is adjoined to β (Chomsky 2004). Under Pair Merge, β retains all its properties.[1] Consequently, adjunction/pair merge is interpreted as *Modification* of the core structure (Folli & Harley 2019, Carnie 2012 inter alia). As Pair Merge creates an ordered set, the linearization of adjuncts is subject to language specific ordering constraints at PF (Lohndal 2012).

So far, I have discussed cases of *External Merge* in which one element is newly introduced into the structure. In addition, it is also possible to re-merge an element that is already part of the structure. This operation is called *Internal Merge* or *Move. Move* can target both heads, i.e. head movement, and phrases, i.e. phrasal movement. Notably, the type of movement restricts the landing site of the moved element. *Head Movement* attaches one head to another head whereas *Phrasal Movement* attaches a phrase into the specifier position of another head (Arregi & Pietraszko 2020, Baker 1985, Travis 1984, see Matushansky 2006 for a critical overview).

(13) a. **Head Movement:**



b. **Phrasal Movement:**



[1] Based on the structural similarity of adjuncts and specifier, some authors argue for a conflation of the two concepts (Kayne 1994 et seq., see also Lohndal 2012).

Adopting a copy theory of movement, the movement of an element leaves a copy in its original position that is deleted at PF but is still interpretable (Nuñes 1995 et seq.).

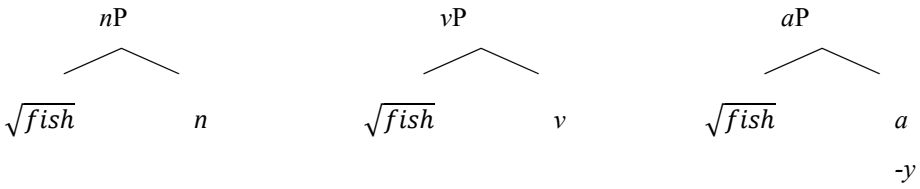
According to Distributed Morphology, the inventory of atomic syntactic elements that can be combined by *Merge* is comprised of two distinct types of morphemes – functional morphemes and roots, the characteristics of which appear below:

(14) a. **Functional morphemes:** These are, by definition, composed of synsem features such [+/– past], or [+/– pl], or [+/– def]. A further hypothesis is that they do not possess phonological features as part of their basic representation.

b. **Roots:** These make up the open class of 'lexical' vocabulary. They include items such as $\sqrt{cat}$, $\sqrt{ox}$, or $\sqrt{sit}$. Roots do not contain or possess synsem features; a working hypothesis is that in the default case, they have an underlying phonological representation. (Embick 2015: 7)

Roots refer to an abstract pair of sound and meaning but do not carry any grammatical (or *synsem*) features by themselves. This means that roots are a-categorial and cannot be interpreted in isolation. Instead, roots are required to merge with a functional categorizing head whereby the root gets its morphosyntactic category – *n* for nouns, *v* for verbs and *a* for adjectives. In this process, the phonological realization and semantic interpretation are determined, i.e. roots are interpreted in their morphosyntactic context. A crucial assumption is that a single categorizer can categorize a single root only (Folli & Harley 2019).

(15) a. *(a) fish* b. *(to) fish* c. *fishy*



In contrast to roots, functional morphemes do not contain any phonological content during the syntactic derivation. Their phonological content is inserted post-syntactically by an operation called *Vocabulary Insertion*. In this operation, phonological exponents of functional morphemes are inserted into the structure. As various *Vocabulary Items* can compete for the same terminal node, this process is sensitive to grammatical and phonological contexts. For example, the adjectivizer in (15) is realized as *-y* in the context of the root $\sqrt{fish}$ but ø in the context of the root $\sqrt{clean}$. The phenomenon where a functional morpheme can have two distinct realizations in complementarity distribution conditioned by the context is called *Contextual Allomorphy* (Embick 2010).

Finally, I adopt the view that derivations are *cyclic*, in that at certain points of the derivation, at the *Phase* level, parts of the structure are sent to Spell-Out and are no longer accessible for further syntactic computation (Chomsky 2008, 2001, 2000). Thus, once a phase is completed – i.e. all the features of the phase head are checked or valued – it is sent to the interfaces for interpretation. I assume that C, D and Voice/*v* are phase heads.

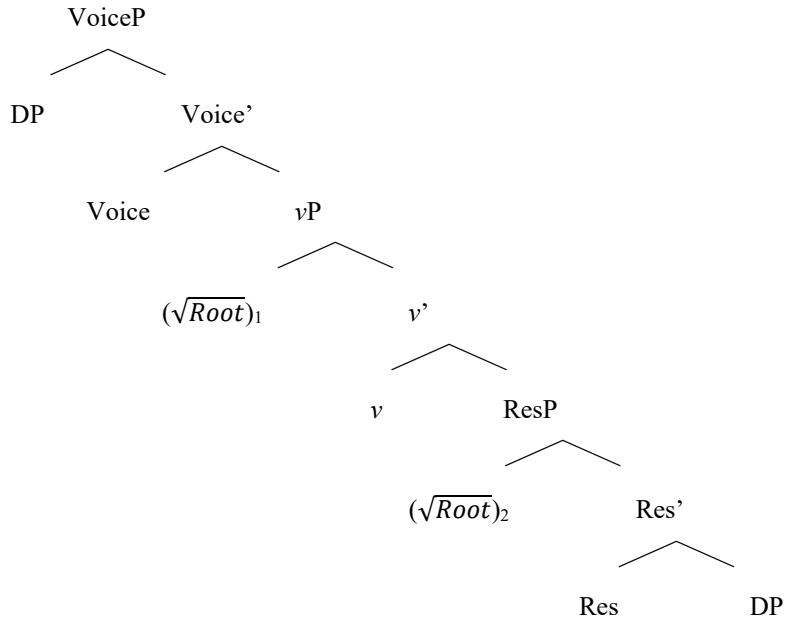
(16) a. [α [H β]]

b. **Phase Impenetrability Condition:**
In phase α with the head H, the domain of H is not accessible to operations outside of α, only H and its edge [its specifier(s)] are accessible to such operations. (Chomsky 2000: 108)

1.1.2 The verbal domain

In this thesis, I adopt a decompositional approach to the verbal domain, i.e. what has been traditionally assumed as a verb or VP is decomposed into several functional layers into which a root is inserted. Therefore, event and argument structure are built within the syntactic derivation by the combination of functional layers and their interpretation at LF. In the following, I briefly discuss the layers which will be relevant in the investigation; namely Voice, *v* and Res(ult) (Alexiadou et al. 2015, Wood 2015, Marantz 2013b, cf. Ramchand 2008). The layered structure of the verbal domain is shown in (17).

(17)



Beyond its categorization function, the verbal categorizer *v* introduces the event type. I assume that *v* comes in two basic variants, an eventive $v_{<e>}$ and a stative $v_{<s>}$. Furthermore, roots can merge to an a-categorial stative Res(ult) head prior to categorization.[2]

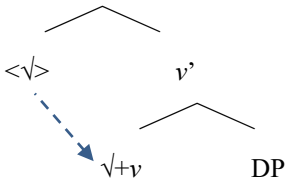
(18) a. $[\![v_{<e>}]\!] = \lambda e.\ event(e)$ b. $[\![v_{<s>}]\!] = \lambda s.\ state(s)$ c. $[\![Res]\!] = \lambda s.\ state(s)$

Further, I assume that when *v* combines with another eventuality denoting XP (e.g. VoiceP, *v*P or the a-categorial stative ResP), causative semantics are contextually interpreted at LF (Wood 2015, Alexiadou et al. 2015, Marantz 2009, Ramchand 2008, Higginbotham 2000). Therefore, I adopt the view that causative semantics are purely configurational (*Allosemy*) and are not part of the syntactic primitives (*pace* flavors of *v*; Folli & Harley 2005 et seq.).

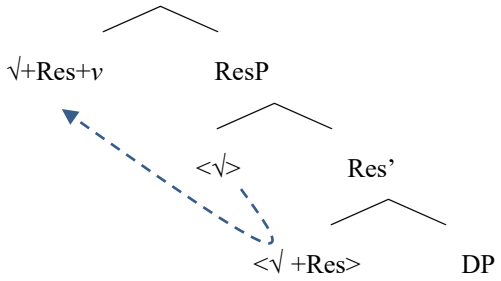
(19) $[\![v_{<v>}]\!] \leftrightarrow \lambda P_{<v,t>}.\lambda v.\exists v'.\ Caus(v, v') \wedge P(v')$ \ __ (eventuality) (Wood 2015: 27)

As indicated by the structure in (17), there are two syntactic positions a root can occur in. Firstly, a root can merge in the specifier of the verbal categorizer *v* (here: $(\sqrt{Root})_1$). In this position, the root modifies the eventuality introduced by the categorizer. Secondly, a root can merge within a stative Result phrase, modifying the result state introduced by the a-categorial Res head (here: $(\sqrt{Root})_2$; Alexiadou & Lohndal 2011). The ResP is then categorized by an eventive *v* head. Crucially, both positional slots cannot be filled by the same root simultaneously (Embick 2009). The information showing which root can occur in which slot is listed in the encyclopedia which determines the distribution of possible verb forms in each language. For categorization, the root must be incorporated into the verbalizing head forming a single complex verbal head (Folli & Harley 2019).

(20) a.



b.

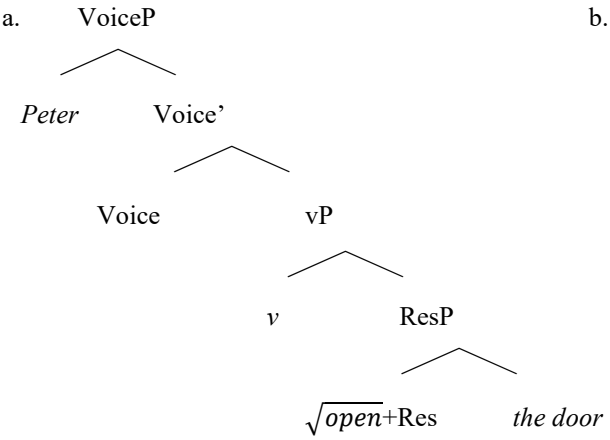


[2] In the semantic notation, I use *v* for eventualities, *e* for events and *s* for states, *x* and *y* for individuals and P and Q for higher order types. With respect to theta roles, Ag stands for the agent theta role and Pat for a generalized patient, or theme, theta role that subsumes different types of undergoer roles.

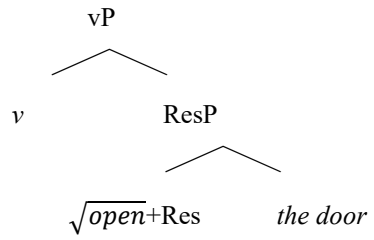
While *Internal Arguments* are merged *v*P-internally, either as the complement of *v* or Res, *External Arguments* are introduced *v*P-externally by Voice (Kratzer 1996). Hereby, I follow the view that there is a division in the labor of *v* and Voice. While *v* verbalizes the root, introduces eventualities and licenses causative semantics, Voice is the locus of syntactic transitivity and agentivity (Alexiadou et al. 2006). Therefore, causation and agentivity are distributed over distinct functional heads (Pylkkänen 2008).

In this way, the causative alternation in which verbs alternate between an unaccusative anticausative and a transitive causative form can be interpreted as a Voice alternation. Therefore, the difference between causative expressions such as *Peter opened the door* and *The door opened* is the presence of a Voice projection that introduces an agent argument (21). Here, I adopt the view that 'true' unaccusatives lack a Voice layer and do not combine with a thematic Voice head. Consequently, Voice and *v* demarcate the phase edge in unaccusatives and transitive verbs, respectively (Alexiadou et al. 2015)

(21) a.



b.



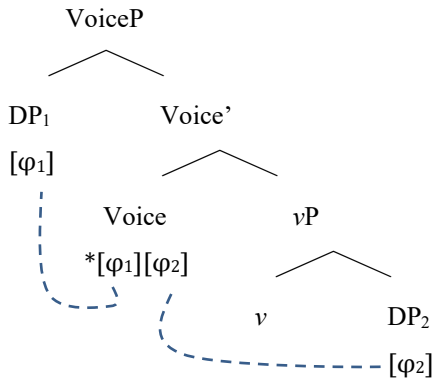
1.1.3 Nominal licensing

In this thesis, I subscribe to the view that the syntactic distribution of arguments depends on abstract nominal licensing (Sheehan & van der Wal 2018, Pesetsky 2014, Vergnaud 1977/2008 inter alia). Traditionally, nominal licensing has been claimed to be responsible for case assignment, thematic licensing and φ-agreement of nominals in a single (syntactic) operation (Sigurðsson 2012). Adopting a slightly modified version of a recent approach by Nie (2020), I assume that abstract nominal licensing is realized by abstract φ-agreement between a nominal licensing head and φ-feature carrying nominals. In contrast to φ-agreement, I take the assignment of morphological case and thematic roles as configurational phenomena (see also Sigurðsson 2012, Wood 2011).

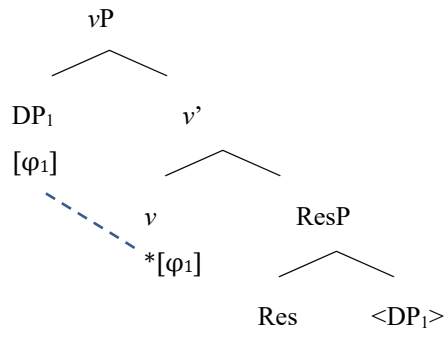
According to Nie (2020), the verbal phase, i.e. VoiceP or *v*P, defines the licensing domain of the clause in which all nominals that carry φ-features must be licensed (cf. Wood & Marantz 2017, Legate 2014, Schäfer 2007). The verbal head that determines the licensing domain obligatorily inherits a strong licensing feature *[φ] by C/T (cf. Chomsky 2008 for the concept of feature inheritance). This licensing feature must be checked by a φ-feature bearing nominal in its specifier position during the derivation – either by the external merge of the external argument (22)a or via movement of the internal argument (22)b. [3] In addition to this obligatory licensing feature, certain functional heads – Voice, *v*, Appl, Poss and *p* – function as secondary licensers in the respective domains (Rezac 2011, Bobaljik 1993, Levin & Massam 1985). These heads come with an additional licensing feature that can be optionally checked in the presence of an unlicensed nominal in their c-command domain. In the absence of such a nominal (in the context of unergatives, for example), the (secondary) φ-features remain unvalued (Preminger 2014). The inventory and distribution of secondary licensing heads varies cross-linguistically which gives rise to different licensing patterns (Nie 2020, Kalin 2018).

This is illustrated in the transitive configuration in (22)a. Here, Voice as a secondary licenser carries two sets of unvalued φ-features, of which one is inherited by C/T. By checking the unvalued φ-features on Voice, both the internal and external argument are licensed by Voice. In unaccusative contexts such as in (22)b, *v* is not a secondary licenser but inherits its licensing features from C/T as it is the highest head in the verbal domain.[4]

(22) a.



b.



[3] Note that feature inheritance from Voice/*v* by C/T seems to violate the phase-impenetrability condition for unaccusatives, as the internal argument in the complement position of *v* should no longer be accessible once the C/T head is merged. To resolve this issue, one could assume that the internal argument moves from its complement position to the Spec, *v*P. As nothing in my analysis hinges on the question of whether obligatory nominal licensing is performed by C, T or Voice, I do not go into further detail here.

[4] Note that abstract φ-licensing by Voice is not necessarily reflected by overt φ-agreement that may occur in the inflectional domain, e.g. T. For a potential relation between abstract φ-licensing and overt agreement morphology see FN97 in section 7.2.2).

Regarding morphological case assignment, Nie (2020) suggests that the presence of two valued φ-features on Voice leads to dependent case marking. Consequently, if Voice licenses a single nominal, the nominal receives unmarked absolutive/nominative case morphology. In the presence of a case competitor, the higher or lower nominal that is licensed by Voice receives dependent ergative or accusative case (cf. Baker 2015, McFadden 2004, Marantz 1991).[5] In addition, secondary licensing heads may assign inherent case locally to their complements. Therefore, morphological case is determined by the local configuration of nominals in the relevant domain such as VoiceP, for example.

Finally, I adopt a configurational analysis of theta-role assignment that treats the distribution of theta-roles to nominal arguments in a respective domain as a post-syntactic operation (Wood & Marantz 2017, Schäfer 2008, Ramchand 2008, Borer 2005b).

(23) **Configurational Theta-role assignment**

The denotation of a DP *X* bears a specific thematic relation *R* (*R* = Agent, Causer, Theme, …) to an event *E* due to the specific syntactic relation of *X* to the syntactic structure expressing or modifying *E*. (Schäfer 2008: 255)

Therefore, the theta-role of a DP must be licensed by the event structure representation in the syntax but does not receive its theta-role via a syntactic operation.

1.1.4 Verb serialization

The term *Verb Serialization* (also: *Serial Verb Constructions (SVCs)* or *Multi-Verb Constructions (MVCs)*) describes a phenomenon where two or more verbs along with their complements function as a single, but complex predicate in a monoclausal structure without any form of coordination or subordination (Aikhenvald 2018, Veenstra & Muysken 2017, Haspelmath 2016, see Lovestrand 2018 for a detailed research history on SVCs).

(24) a. *Bong ma **ta tiwiye** lee ente.* DAAKAKA
Bong REALcut break tree DEM
'Bong broke the tree by cutting it.'

b. *Angela mwe **towaase** tan ma **mesa**.*
Angela REAL sweep ground REAL clean.
'Angela swept the floor clean.'

[5] Alternatively, the dependent case may be treated as a purely post-syntactic phenomenon in which morphological case is computed based on c-command relationship of licensed, but as yet case-less nominals at PF (e.g. Wood 2011). However, as dependent case will not play any role in this thesis, I am agnostic about the exact implementation of dependent ergative/accusative case.

However, though the label is widely used in typological and descriptive literature, its demarcation from other, potentially related, phenomenon such as auxiliary or light verb construction remains an ongoing issue in linguistic research (Butt 2010, but see Aboh 2009, Hagemeijer 2001 for an analysis of SVCs as light/functional verbs). One reason for the difficulty providing a unified definition for phenomena that seem to be related to an abstract notion of verb serialization is the diverse nature of SVCs with several syntactic and semantic subtypes of SVCs whose properties may even vary cross-linguistically (Bisang 2009). Nevertheless, most SVCs share some common features which justify the assumption of verb serialization as a collective term for related multi-verb constructions in the world's languages. Adopting the diagnostics from Veenstra & Muysken (2017), proto-typical SVCs usually exhibit the following properties:[6]

(25) **Serial Verb Construction: Diagnostics** (Veenstra & Muysken 2017)
A serial verb construction contains [at least] two verbs which have
a. only one grammatical subject
b. at most one shared grammatical object
c. one specification for tense/mood/aspect (either marked once or on each predicate)
d. only one possible negator;
e. no intervening coordinating conjunction;
f. no intervening subordinating conjunction; and
g. no intervening pause

In addition, SVCs are often described to what is conceptualized as a single, but complex event by the speakers (Bohnemeyer & van Valin 2017, von Prince 2017d, Cole 2016, Stewart 2001, Durie 1997, Givón 1991 among others).[7]

[6] Note that these diagnostics are not able to cover the full variation of constructions that can be argued to be instances of verb serialization. For example, so-called 'adverbial SVCs', which are a prominent feature of Oceanic languages, do not share a single argument but solely modify the main event (Crowley 2002).
[7] The range of syntactic phenomena that is covered by the term *Serial Verb Constructions* is observed in a wide range of unrelated languages and areas such as Austronesian languages, including Oceanic (e.g. Cleary-Kemp 2015, Verkerk & Frostad 2013, Bril & Ozanne-Rivierre 2004, Crowley 2002, Durie 1997, Bradshaw 1982) and Western Malayo-Polynesian languages (Unterladstetter 2020), Papuan (e.g. Klamer 2018, Senft 2008, Foley & Olson 1985, Givón 1991, Pawley 1987) and Australian languages (Nordlinger 2014), East Asian languages (e.g. Sugar 2019, Cole 2016, Liu 2019, Hu 2018, Jarkey 2015, Ko & Sohn 2015, Tomioka 2006, Lin 2004, Li & Thompson 1973), African languages (e.g. Zimmermann & Amaechi 2020, Angsongna 2019, Lovestrand 2018, Aboh 2009, Baker & Stewart 2002, Collins 2002, 1997, Carstens 2002, Stewart 2001, Déchaine 1993, Lord 1993, Baker 1989, Awóyalé 1988, Givón 1975), South American languages (Aikhenvald & Muysken 2011, Aikhenvald 1999) as well as many Creole languages (e.g. Gramatke 2019, Lloret Florenciano 2018 , Aboh 2015a, Meyerhoff 2001, Veenstra 1996, Sebba 1987, see Ross & Lovestrand 2018, Aikhenvald 2018 for a typological overview).

To structure the diverse patterns of verb serialization, SVCs are usually classified according to their broader syntactic and semantic properties. With regard to the syntax, SVCs are commonly classified according to the following parameter (Aikhenvald 2018):

a. ***Symmetry*:** An SVC is asymmetric if one of the verb slots is restricted to a certain class of verb (i.e. transitive/intransitive, manner/result); it is symmetric if no such restrictions are in place.

(26) *a. Sā **solo** **fa'a-mamā** e le Pita le laulau.* SAMOAN
PST wipe CAUS-clean ERG SPEC Peter SPEC table
'Peter cleaned the table by wiping it.'

b. *Úchè **gbù-rù** òkúkò **sí-é**.* IGBO
Uche kill-PST chicken cook
'Uche killed and cooked the chicken.' (Zimmermann & Amaechi 2020: 2)

b. ***Concordant marking*:** A *single marking SVC* describes a SVC where the inflectional category is only marked once in the whole construction (e.g. on V1 or V2) (27)a,b, while *multiple marking* describes SVCs where it is marked on each verb separately (27)c.

(27) a. *Úchè **gbù-rù** òkúkò **sí-é**.* IGBO
Uche kill-PST chicken cook
'Uche killed and cooked the chicken.' (Zimmermann & Amaechi 2020: 2)

b. ***Mi=dúw=n** óyi **mi=tà=ān**.* DEGEMA
1.SG=follow=FAC 3.SG 1SG=go=FAC
'I went with her/him.' (Kari 2004: 211)

c. ***Argument structure:*** In a *nuclear layer* SVC, the argument structure of both verbs completely overlap (also V-V *serialization*); in contrast, in a *core-layer* serialization, the argument structure overlaps only partially (VP-VP serialization; cf. Foley & Olson 1985).

(28) a. *Sā **solo** **fa'a-mamā** e le Pita le laulau.* SAMOAN
PST wipe CAUS-clean ERG SPEC Peter SPEC table
'Peter cleaned the table by wiping it.'

b. *Wei **duu** **marri** table.* TÎRÎ
1SG.FUT wipe be.dry table
'I will wipe the table dry.' (Osumi 1990: 215)

d. ***Contiguity:*** In *contiguous SVCs*, both verbs are directly adjacent to each other, whereas in *non-contiguous SVCs* syntactic elements such as the object can occur in between the two verbs.

(29) a. *Nws* ***ntaus*** *tus dev* ***khiav*** *kiag.* WHITE HMONG
S/he beat CLF dog flee completely
'He beat the dog off.' (Jarkey 1991: 125)

b. *Bong ma* ***tas tiwiye*** *etastas.* DAAKAKA
Bong REAL sit break bench
'Bong broke the bench by sitting on it.'

Relating to the contiguity, a more fine-grained distinction of contiguous SVCs and verbal compounds (also: *root-serialization*) has been discussed in which the latter exhibits the same morphosyntactic and morphophonological properties as non-composed verbs (e.g. Déchaine 1993, Crowley 2002). In addition, verbal compounds often show idiosyncratic meaning instead of compositional meaning (Thieberger 2007). In this thesis, I treat verbal compounds as an instance of verb serialization, as the differences seem to arise primarily from the morphosyntactic level of complex predicate building (cf. Owens 2011, Margetts 1999, Givón 1991 among others).

From a semantic perspective, SVCs encode a wide range of semantic relations between the two verbs, including *directional* (30)a*, instrumental, applicative, manner, associated-motion, (con)sequential* (30)b and *aspectual* as well as *causative* and *resultative* and adverbial relations (30)c (Aikhenvald 2018, Veenstra & Muysken 2017). However, languages that exhibit SVCs usually do not show all semantic types of SVCs (Ross & Lovestrand 2018).

(30) a. *Se* ***wose*** *se* ***dobi****.* SALIBA/LOGEA
3PL paddle 3PL go.down
'They paddled down.' (Margetts 2004: 79)

b. *Úchè* ***gbù-rù*** *òkúkò* ***sí-é.*** IGBO
Uche kill-PST chicken cook
'Uche killed and cooked the chicken.' (Zimmermann & Amaechi 2020: 2)

c. *Bong* ***ma*** ***sengave*** *beleem ente* ***ma medó.*** DAAKAKA
Bong REAL open door DEM REALbe.slow
'Bong opened the door slowly.'

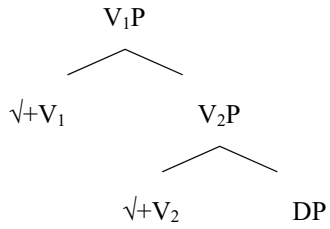
In this thesis, I focus solely on resultative serial constructions (RSVCs) in Oceanic SVCs (see chapter 4 for a detailed overview of the morphosyntactic features).

In the generative tradition, verb serialization has been analyzed in terms of complex structure building, made familiar by other types of complex predication. While it appears

that SVCs vary significantly according to their underlying morphosyntactic composition across syntactic and semantic types, there is a general consensus that the core phenomenon of verb serialization defines compositional phenomena in the verbal domain at or below the level of Voice. As a result, verb serialization differs from potentially related constructions, such as clause union phenomena or adverbial clauses, in the amount of syntactic projections that each constituent contributes to structure. In the following, I present the basic compositional types in the morphosyntax of SVCs that have been proposed in the respective literature (see also Veenstra & Muysken 2017 for an overview).[8]

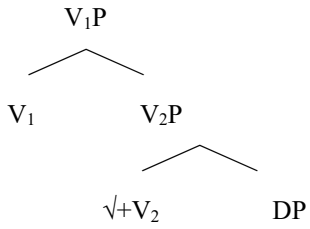
a. ***Complementation***: The most wide-spread analysis of SVCs suggests that one verb takes another verb as its complement. This analysis draws a relationship between verb serialization and (clausal) embedding, such as resultative secondary predication or restructuring predicates. In the nominal domain, this structure building type has also been discussed in the relation to compounding (e.g. Hu 2018, Svenonius 2016, Cleary-Kemp 2015, Lin 2004, Collins 2002, 1997, Stewart 2001, Larson 1991, Lefebvre 1991).

(31)



b. ***Light Verb*****:** Indeterminately related to the complementation analysis, a functional/light verb analysis takes the V1 as a functional/light verb that is the spell-out of a functional head in the extended projection of the V2. Therefore, this approach rejects a lexical nature of the V1 and relates verb serializing to restructuring or auxiliary verbs, which is why it is sometimes also called low restructuring (Swenson 2019, Sugar 2019, Aboh 2018, 2015b, 2009, Hagemeijer 2001 etc.).

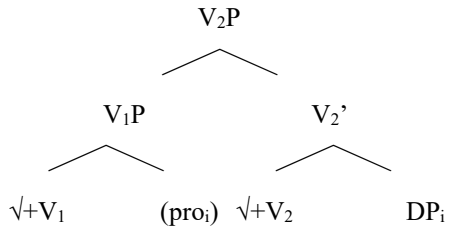
(32)



c. ***Adjunction*****:** Under an adjunction analysis, one verb is adjoined to another which functions as the main predicate of the clause. This configuration is related to adverbial modification by prepositional adjuncts, e.g. in the means construction (Sugar 2019, Veenstra 2018, 2004, 1996, Ko & Sohn 2015, Baker & Stewart 2002, Déchaine 1993).

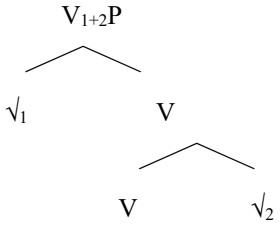
[8] Note that throughout this thesis I use (capitalized) V to refer to the verbal constituents of an SVC without committing to the presence of designated functional layers (i.e. Voice, *v* or √).

(33)



d. ***Complex head formation***: Lastly, SVCs may be derived by complex predicate formation where to two roots are combine with a single verbal categorizer, i.e. root serialization (Liu 2019, cf. Baker 1989, also De Belder 2017, Song 2017, Zhang 2007 on the nominal domain). Note that in the present system, this configuration violates the underlying assumption that a single categorizer can only categorize a single root at a time (cf. Folli & Harley 2019). [9]

(34)



In the structures above, I have abstracted away from the argument structure. With respect to the external argument, there is some consensus that it is introduced by a single Voice projection on top of the complex verbal predicate in most types of SVCs (Ko & Sohn 2015, Aboh 2009, Baker & Stewart 2002 inter alia). In contrast, the determination of the locus and nature of the shared internal argument is notoriously problematic. The primary question is how the sole internal argument of an SVC is associated with the two verbal projections. In analyses that assume the internal argument must merge in both VPs, *pro*/PRO or movement analyses usually account for the unification of both arguments (see Baker & Stewart 2002, Collins 2002, 1997, Stewart 2001). This contrasts with analyses that suggest only a single representation of the internal argument is structurally present, either because the verbs merge before the internal argument is introduced or because one verb does not project (Liu 2019, Sugar 2019, Aboh 2009, Tomioka 2006, Lin 2004).

In addition to the syntactic composition of the verbs, recent studies highlight the relevance of event semantic diagnostics for the investigation of the internal organization of events in verb serialization (Zimmermann & Amaechi 2020, Owens 2011, Stewart

[9] In addition, it has been proposed that two roots merge before being categorized by a categorizer (e.g. Zhang 2007 in the nominal domain). In the approach adopted here, roots do not project and it is, therefore, not clear what it would mean to merge two a-categorial roots. Moreover, Tomioka (2006) suggests that in Japanese resultative compounds two verbal heads combine to a single complex head via External Merge. While some authors argue for the possibility that head adjunction can be derived by External Merge (cf. Eik 2019, Harðarson 2017, Piggott & Travis 2013), such operations are not standardly assumed as they raise further questions on phrase structure building more generally (see Mathieu et al. 2017).

2001, Déchaine 1993, also Baker & Harvey 2010, Awóyalé 1988). Below, I briefly introduce the basic compositional types of complex predication in event semantics.

a. ***Event Modification***: In Event-Modification, both verbs predicate over a single atomic event *e*. This means that the verbs do not introduce their own event variable but simply combine their predications to a single event description. This mechanism is well-established for adverbial modification by adverbs of space, time or manner (Zimmermann & Amaechi 2020, Liu 2019, Stewart 2001 for its application on SVCs).

(35) $[\![SVC]\!] = \lambda e.\ P(e) \wedge Q(e)$

b. ***Event Extension*:** Event-Extension describes the fusion of two atomic events e_1 and e_2 to a complex event e_3 in a non-Boolean part-whole relationship. Therefore, both events that are introduced by the verbs are individual parts of a third (unspecified) macro-event which determines the force direction of the complex event and its parts. Event Extension is cause-like as the events are in an asymmetric relation (see section 3.4 for a more detailed discussion; Zimmermann & Amaechi 2020, cf. Bohnemeyer & van Valin 2017 on the macro-event property). [10]

(36) $[\![SVC]\!] = \lambda e3 \lambda e2 \lambda e1.\ P(e1) \wedge e1 \leq e3 \wedge Q(e2) \wedge e1 \leq e3$

c. ***Event Cumulation*:** In Event Cumulation, each verb introduces its own independent atomic event, either e_1 or e_2, which are cumulated to a plural event in SVCs. In contrast to Event Extension, the Event Cumulation applies to a heterogeneous set of atomic events that do not have constraints on causal, temporal or spatial cohesion (Zimmermann & Amaechi 2020, Stewart 2001).

[10] The difference between the compositional mechanisms *Event Extension* and *Event Cumulation* requires the semantic concept of *force* that operates on eventualities (Zimmermann & Amaechi 2020, Copley & Harley 2015, Goldschmidt 2018). In short, *force* is thought as a linguistic function from eventualities into other eventualities expressed by dynamic verbal predicates. Commonly, *forces* are represented as vectors in a multidimensional semantic space that visualizes the netto change *net*(f) between an input and output eventuality. Therefore, each (dynamic) verbal predicate comes with its own individual *force* value. Generally, *forces* can be interpreted as cause-like dependencies between two eventualities. Although *forces* have been related to individual verbal predicates only, Zimmermann & Amaechi (2020) extend the notion of *force* to contexts of complex predication, in which two predicates contribute their *force* values to the calculation of a single netto *force* value. Consequently, the two predicates can be tied together a single force direction which they call *Event Extension*.

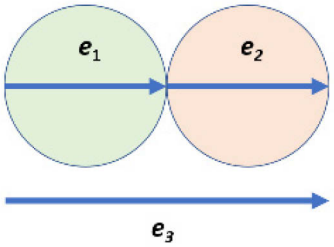


Figure I: Event composition and force extension in Event composition Zimmermann & Amaechi (2020).

As the notion of *force* causes a certain amount of complexity, I will only refer to this concept when necessary. In the semantic denotation introduced here, the difference between independent and *force*-dependent event composition is reflected by the semantic operators $\oplus$ for Boolean (independent) and $\leq$ for non-Boolean (dependent) part-whole structures.

(37) ⟦SVC⟧ = ∃e.e1.e2. e=e1⊕e2 ∧ P(e1) ∧ Q(e2)

d. ***∃-conjunction***: ∃-conjunction describes cases in which two existentially bound predicates are conjoined without an overt coordinator. Therefore, it has been argued that ∃-conjunction is not an instance of verb serialization, but a case of covert coordination, syntactically and semantically closely related to overt coordination (Zimmermann & Amaechi 2020, Stewart 2001).

(38) ⟦SVC⟧ = ∃e1. P(e1) ∧ ∃e2 Q(e2)

e. ***Event Relation***: Lastly, the two predicates e_1 and e_2 can be combined via Event Relation in which one event stands in asymmetric (causal) relation *R* with another event (Berger 2020, Zimmermann 2017, Owens 2011, Baker & Harvey 2010). Other than event extension, the two events are not necessarily in a part whole relation but represent independent subevents.

(39) ⟦SVC⟧ = λe. P(e_1) ∧ Caus(e_1, e_2) ∧ Q(e_2)

The mapping of morphosyntactic structure to semantic interpretation will be subject of the analysis of RSVCs in Oceanic languages in chapter 6 and chapter 8.

In sum, this brief overview shows that the term 'verb serialization' subsumes several related phenomena in which verbal predicates are combined in a monoclausal structure. However, the diverse morphosyntactic and semantic nature of verb serialization strongly suggests that SVCs cannot be reduced to a single structural configuration of two verbs across all languages and subtypes. Instead, more fine-grained studies of the characteristics of SVCs are needed to determine its discriminating characteristics.

1.2 Methodology

To achieve the goals of this thesis, I employed several methods including corpus work and elicitation techniques such as questionnaires and storyboards, as well as judgement tasks used in my fieldwork in Vanuatu and Hawai'i. For Daakaka, I primarily rely on the extensive grammar (von Prince 2015), a detailed dictionary (von Prince 2017a), as well as natural corpus data (von Prince 2013). Moreover, I used corpus data on the closely related language Daakie (Krifka 2013). The corpus data was accessible via ANNIS with the support of the MELATAMP project (PI: Kilu von Prince, Manfred Krifka). These primary data sources were designed for the purpose of language description and language documentation. Therefore, these sources provide only a limited set of uncontrolled data which is not sufficient for detailed morphosyntactic and semantic analysis. In the context of formal analyses, negative evidence is as equally important as positive evidence. Notably negative evidence cannot be extracted from natural corpus data but requires elicitation

sessions with native speakers (Krajinovic 2020, Bohnemeyer 2015, Matthewson 2004, but see Mithun 2001, Schütze 1996 for criticism).

My first field trip to Vanuatu took place from December 2017 to January 2018, with a two and half weeks stay with the speaker's community in the village Emiotungan on the island of Ambrym. This trip was intended to introduce myself to the community and to allow me practice the contact language Bislama, an Oceanic Creole language which is the national language of Vanuatu, as well as to gain an overview of causative and resultative structures in Daakaka. For the latter purpose, I have developed three storyboards inspired by Bohnemeyer et al. (2001) (*The old bench; The broken tree*; *Good weather, bad weather*) which all target stative, inchoative, causative and resultative event descriptions (Hopperdietzel 2020a). I have chosen storyboards as the elicitation technique is well-established in semantic research and provides semi-natural controlled language data. Because of this controlled setting, storyboard elicitations can reveal morphosyntactic and semantic variation in the description of events (Krajinovic 2020, Burton & Matthewson 2015). In addition, I have produced a small questionnaire on resultatives. This questionnaire was designed to explore the behavior of property-concept (PC) states, such as 'small', and target states, such as 'broken', in resultative structures in Daakaka inspired by Beavers et al. (2017).

In the first week, I stayed in Port Vila and translated the prepared stimuli into Bislama with the generous help of Robert Early, the director of the Pacific Language Center at the University of South Pacific/Emalus Campus. After re-checking the stimuli with a native speaker in Port Vila, a total of ten speakers participated in the elicitation with an age range 24 and 85. Most speakers were between 24 and 48, with only three speakers older than 60. There was a bias towards male speakers (8 male, 2 female) which partly resulted from socio-cultural norms. All participants are native speaker of Daakaka, and speak Bislama and a foreign language (mainly English) to a minor degree. In addition, most speakers were somewhat fluent in neighboring languages, especially Daakie, Dalkalaen and North Ambrym.

In the storyboard elicitation sessions, I presented the story to the speakers in Bislama. Then, the speaker went through the story again and has a practice round if necessary. After the speaker indicated that they understood the story, I recorded them telling the story back to me (Burton & Matthewson 2015). While I intended to use storyboards without subtitles to minimize the influence of the contact language Bislama, some (older) participants felt uncomfortable telling the story from the blank version. In this case, I used

storyboards with subtitles in Bislama. Although a bias of Bislama cannot be ruled out, Krajinovic (2020) notes that the use of Bislama subtitles does not seem, to a great extent, to influence the speaker's production in the target language in her work on South Efate. An example of the storyboard material is given in Figure 2. The sequence is part of the larger storyboard *The old bench*. Prior to the situation, the protagonist Bong sat down on an old bench which broke under his weight. As he leaves to get tools to fix it, his friend Adam comes to the broken bench and wonders what happened. This sequence of the storyboard targets the realization of 'break' in different grammatical contexts: (a) a stative or anticausative use in [5] and (b) a causative/resultative use in [6]-[8] with two different causing actions to check the productivity of the constructions.

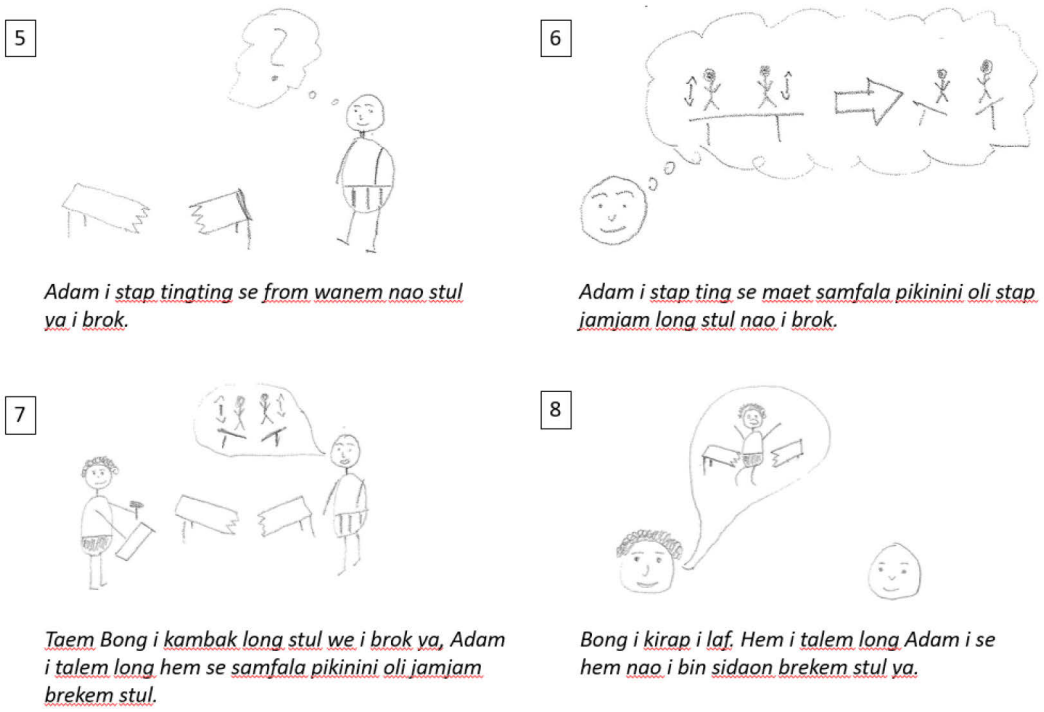


Figure 2: Sequence taken from the storyboard The old bench *(Hopperdietzel 2020a)*.

In addition, I developed a questionnaire to elicit resultative structures. The main goal was to explore how Daakaka organizes causative/resultative change-of-state predicates based on stative PC-lexemes, such as 'small', and target states, such as 'broken'. Here, I presented a short background story in Bislama to the speakers, followed by a question that targeted the causative/resultative expression. The participants were asked to give the answer in their native language Daakaka. As shown in (40), the production task revealed some interesting variation in the target structure.

(40) **English:**

Bong and his friends want to build a new house. They go into the bush and cut a tree. The tree is too big to carry it to the village. They cut the tree small and bring the wood to the village.

Bislama:

Bong wetem ol fren blong hem oli wantem bildim wan niufala haos. Oli go long bus, oli katemdaon wan stampa wud. Tri ia i bigwan tumas, nao oli no save karem i kam long vilej. Nao, oli katem i smolsmol mo oli karem i kam long vilej.

Question:

Taem we oli luk se tri ia i bigwan tumas, oli mekem wanem?

Answer:

a. *Ya=m ta wa ma mwelili.*
3PL=REAL cut.ITR split.TR REAL small
'They split the tree small by cutting it.' (Hopperdietzel 2020a: JPH1-033-F)

b. *Ya=m te lee ma mwelili.*
3PL=REAL cut.TR tree REAL small
'They cut the tree small.' (Hopperdietzel 2020a: JPH1-025-F)

c. *Ya=m ta wa lee ente.*
3PL=REAL cut.ITR split.TR tree DEM
'They cut the tree small.' (Hopperdietzel 2020a: JPH1-009-F)

d. *Ya=m ta mwelili-ane lee.*
3PL=REAL cut.ITR small-TR tree
'They cut the tree small.' (Hopperdietzel 2020a: JPH1-013-F)

The data collected during my first field trip, along with the elicitation material, has been translated and transcribed via ELAN with the help of Kilu von Prince, and is stored at the Kaipuleohone Language Archive at the University of Hawai'i at Manoa (Hopperdietzel 2020a).

In contrast to Daakaka which has only recently been described linguistically, Samoan already has a small tradition of linguistic research. Therefore, I was able to extract resultative structures from already published material, mainly from the extensive grammar (Mosel & Hovdhaugen 1992), a detailed dictionary (Milner 1966) and the Samoan Web Corpus (Ambati & Hunkin 2018). However, as the corpus does not provide English translations, I hesitated in using the extracted data in this thesis to avoid translational errors. In addition, Mosel (2004) provides a short discussion of resultative structures in the languages, including several examples.

After this initial stage of data collection, I conducted a second field trip to do a comparative investigation into the lexical semantics and morphosyntactic properties of simple and complex predicates in Daakaka and Samoan. Therefore, I developed a questionnaire based on the diagnostics for presence of manner and result components in simple predicates, as proposed by Alexiadou et al. (2017), Beavers & Koontz-Garboden (2012) and (Rappaport Hovav & Levin 2010). In addition, I applied the diagnostics of Zimmermann & Amaechi (2020) to explore the event semantic composition of the predicates in resultative constructions. These questionnaires consist of manipulated examples in the respective languages of the material collected during the first field trip and via corpus data and were supported by background contexts and/or pictures when needed. Both questionnaires will be made available at the Kapuleohone Languag Archive.

The second field trip was supported by the *German Academic Exchange Service* (DAAD) and lasted two months from March 2019 to early May 2019. During this trip, I spent the first month working as a visiting scholar at Pacific Language Center at the University of the South Pacific/Emalus Campus (host: Robert Early). As the kind of grammatical and semantic judgements I sought requires a good sense of linguistic intuition and creativity, as well as patience and a general interest in reflecting about language, I decided to work with a smaller group of three participants (one in Port Vila and two in Emiotungan) who met the criteria. The participants were male and were between 23, 30 and 61 years old. During the session, I presented the manipulated data in a short background context and asked the speakers to judge the grammaticality of the sentence and the felicity of the sentence in the given context. The participants were asked to name alternative ways to express the meaning, especially when the sentence or the context was unnatural, ungrammatical or infelicitous. Therefore, each item was carefully discussed, which is why I had to distribute the questionnaire over several sessions. Furthermore, I worked with two other speakers (aged 48 and 85 from Emiotungan and Sesevi) with whom I went through parts of the questionnaires.

The second month of the trip I spent as a visiting scholar at the Department for Indo-Pacific Languages at the University of Hawa'i at Manoa in Honolulu, HI (host: John Mayer). The choice to conduct linguistic fieldwork on Samoan in Honolulu was motivated by the fact that the University of Hawai'i Manoa has a Samoan program with several native speaker educators. In addition, Honolulu has a significant Samoan expat community from both American Samoa and the Independent State of Samoa. During my stay, I attended Samoan classes at Le Fetuao Samoan Language Center in Kapolei, HI. After

checking my material with John Mayer, associate professor of Samoan at the UH, I worked with three main informants who were Samoan language educators at UH. The participants (two male, one female) were between 58 and 68 years old and had lived outside of Samoa for over 25 years. The sessions clearly benefited from the profession of the participants and their ability to reflect upon their language. In addition, three participants (all female; aged 55-57) only participated in parts of the study due to time reasons. All participants were part of larger Samoan expat communities and spoke Samoan both at work and at home on a daily basis. In contrast, younger speakers who grew up in Hawai'i or moved from Samoa to Hawai'i at an early age were not comfortable in giving judgements and performed differently to more advanced speakers. Therefore, I excluded their data from the analysis (two speakers; one male, one female; 23-30). The data that was collected in the second field trip is currently under preparation for archiving and is not yet part of the collection at the Kaipuleohone Language Archive.

In general, the present study would not have been possible without the insights gained via fieldwork, as the more fine-grained distinctions, as well as negative evidence, is rarely provided in corpora or grammars. Particularly for the study of underdocumented or understudied languages, original fieldwork is indispensable for morphosyntactic and semantic analysis of specific phenomena. While linguistic fieldwork is an exciting and rewarding experience most of the time, data collection in remote areas such as Ambrym can be challenging due to the limited facilities on site such as restricted access to power or the internet. A further challenge in Vanuatu are natural circumstances such as heavy rain and flooding which I experienced during my second stay during the rainy season or the eruption of the local volcano just a few months before my trip started. Despite these challenges, the opportunity to work directly with native speakers in their local environment provided me with the social-cultural background that, I think, is necessary for a study of language that also gives something back to the speaker's community. As such, the storyboards will be used to produce literacy material for school children.

1.3 Outline

This thesis falls into three parts. In the first part, I present an overview of the syntactic, semantic, and typological features of resultative constructions, before I present two case studies on the Oceanic languages Samoan (Part II) and Daakaka (Part III). The last chapter summarizes the results of the investigation and discusses its implication for formal and typological theories of the distribution of manner and result meaning components.

In chapter 2, I introduce the concept of event decomposition, with a focus on manner/result complementarity. By reviewing the diagnostics proposed by Rappaport Hovav & Levin (2010), Beavers & Koontz-Garboden (2012) and Alexiadou et al. (2017), I show that roots fall into two broad classes – the event modifying root that proto-typically denotes the manner of an event (e.g. *hammer*) and event argument roots that specify the result of an event (e.g. *flat*). Adopting a syntactic analysis of event composition, I propose that root meaning is derived configurationally, based on the relative position of the root to the event introducing functional head $v_{<e>}$ (Alexiadou et al. 2015, Mateu & Acedo-Matellan 2012, Embick 2009, 2004). In particular, I argue that event modifying roots are merged in the modifying position (sister of *v*'), whereas result-denoting roots are merged in the complement position within an a-categorial stative Res(ult)P (Folli & Harley 2019, Alexiadou & Lohndal 2011). With a focus on the event and argument structure of causative verbs, I follow the analysis of Alexiadou et al. (2015, 2006) that agentive and causative semantics are introduced at different layers within the verbal domain. While agentivity is tied to a designated Voice projection, causative semantics are read off the structural configuration of a bi-eventive *v*P, allowing event modifiers to occur in the absence of Voice.

In chapter 3, I investigate the event and argument structure of two types of resultative constructions – resultative secondary predication (e.g. *Peter hammered the metal flat.*) and the means construction (e.g. *Peter flattened the metal by hammering it*). By examining the semantic properties of resultative secondary predication, I suggest that resultative secondary predication primarily differs from lexical causatives in the morpho-syntactic type of result denoting complement of *v* (Folli & Harley 2019, Embick 2004). While lexical causatives take a-categorial ResultP complements, resultative constructions merge with pre-categorized *x*P complements, which allows the verbalizing head to be modified by an additional manner root. Therefore, the result state is not realized by the main verb but by a secondary predicate. This contrasts with the means construction, in which the result state is denoted by a causative predicate. In this construction, the main verb is a lexical causative verb that entails an underspecified causing event modified by the adjoined manner predicate (Sæbø 2016, Solstad 2009). Based on this observation, I argue that the difference between both constructions can be reduced to the morphosyntactic (and semantic) size of the constituents (i.e. √, *a*P, PP, etc.) which appear in the respective syntactic position relative to the (causing) event introducing *v* head. Reviewing the typological literature on resultatives, I show that languages fall into two broad classes

based on whether they prototypically encode resultative meaning by resultative secondary predication (*satellite*-framed languages such as English), or by the means construction (verb-framed languages such as Romance; Talmy 2000, 1991). Interestingly, this typology seems to extend to serializing languages in which both the manner and result component are realized by verbal predicates. Therefore, I hypothesize that serializing languages do not differ significantly from non-serializing languages in the general organization of argument and event structure.

To further explore the cross-linguistic variation, in chapter 4, I present a typological overview of resultative constructions in Oceanic languages. Although Oceanic languages commonly express resultative meaning in RSVCs, a significant amount of (micro)variation has been reported, with respect to the morphosyntactic realization of the manner and result denoting verbs within and across languages (Verkerk & Frostad 2013, Bradshaw 1982). Based on a survey of 40 grammar descriptions, I identify three basic classes of RSVCs in Oceanic languages: (i) Type-A-RSVCs in which the result state is denoted by a lexical causative verb, (ii) Type-B-RSVCs in which the result state is denoted by a morphological causative verb, derived by a reflex of the Proto-Oceanic causative prefix **pa(ka)*-, and (iii) Type-C-RSVCs in which the result state is denoted by a stative PC verb. To account for the microvariation, I investigate the morphosyntactic and semantic properties of Type-A- and Type-B-RSVCs by conducting two case studies on resultative constructions in the Polynesian languages Samoan (Part II), and the Melanesian language Daakaka (Part III), leaving a more detailed examination of Type-C-RSVCs for future research.

In chapter 5, I begin the analysis of Type-B-RSVCs with a careful examination of the morphosyntactic and semantic properties of Samoan verb classes. Firstly, I revisit Samoan's status as a split ergative language. By proposing a novel analysis of syntactic ergativity for Samoan, I argue that split-ergativity follows from two distinct strategies to avoid the limited nominal licensing of arguments in transitive contexts in syntactic ergative languages (cf. Nie 2020, Polinsky 2016). Secondly, according to Pylkkänen's (2008) classification, I classify Samoan morphological *fa'a*-causatives (which typically occur as the result denoting V2 in RSVCs) as phase-selecting and non-Voice-bundling causatives. Furthermore, I interpret the causative prefix *fa'a*- as the bi-directionally determined spell-out of an eventive *v* head in causative configurations. Lastly, I apply the diagnostics for the distribution of manner and result meaning components on Samoan simple predicates (Alexiadou et al. 2017, Beavers & Koontz-Garboden 2012, Rappaport Hovav & Levin

2010). Although the results support the general hypothesis of manner/result complementarity, Samoan exhibits a class of causative manner verbs that denote the manner of an action but simultaneously entail an underspecified result state. In contrast, causative result verbs are primarily derived primarily by the causative prefix *fa'a-*.

In chapter 6, I focus on the morphosyntactic and semantic composition of Type-B-RSVCs in Samoan. I first show that the distribution of verbal predicates is in an asymmetric relation, determined by the specification of manner and result meaning components. Therefore, (causative) manner verbs occur in the V1 position, whereas *fa'a*-causatives occur in the V2 position. Crucially, both verbal predicates contribute their argument and event structure properties to the RSVCs, indicating that Type-B-RSVCs are compositionally derived. After that, I demonstrate that the manner V1 behaves as a syntactic adjunct that attaches to the causative V2 by the application of language specific diagnostics including reduplication, adverbial modification and case marking patterns. Crucial evidence comes also from a narrow repetitive reading of the repetitive marker *toe* 'again' (Lechner et al. 2015, Beck & Snyder 2001b, von Stechow 1996). As repetitive modifiers are able to individually scope over the causing event in adjoined structures only, the availability of such a reading in the context of Type-B-RSVCs suggests that this type of resultatives belongs to the class of means constructions. This hypothesis is borne out by the result of event semantic diagnostics which unambiguously show that the manner predicate modifies the causing event entailed by the causative V2 (Zimmermann & Amaechi 2020). Consequently, I propose that the manner V1 is merged as a *v*P-sized modifier as a sister of the causing event introducing *v* head which is spelled out as *fa'a-*. Finally, I point out that the observed matching condition on the internal argument follows from language specific constraints, such as object deletion and case marking, whereas the matching condition on the event type seems to be a general requirement for serialized structures (Ko & Sohn 2015, Kalin & Keenan 2011, Baker & Stewart 2002).

In chapter 7, I turn to the second case study on Type-A-RSVCs in Daakaka. Working parallel to the study of Type-B-RSVCs, I first examine the morphosyntactic and lexical semantic properties of verbal predicates outside of complex predication. Daakaka, unlike Samoan, does not exhibit designated causative morphology, instead only exhibiting transitive morphology which is often realized by suppletive verb forms. By analyzing the distribution of the transitive marker in the context of both manner and result verbs, I argue that the transitive marking is the spell-out of a secondary nominal licenser located on Voice. Therefore, causative meaning is primarily expressed by lexical causative verbs.

However, causative result verbs in Daakaka are subject to a serialization condition, in that this class of verbs necessarily combine with manner verbs in Type-A-RSVCs. Crucially, a group of ambiguous verbs that can occur outside of this construction drop their result component and function as manner verbs instead (cf. Levin & Rappaport Hovav 2013 on cut-type verbs in English - although without the serializing condition). While such behavior has not been discussed in the literature before, I identify this class of ambiguous roots as support for the assumption of configurational root meaning, in that roots can be underspecified in this respect.

In chapter 8, I show that Type-A-RSVCs share an underlying type of morphosyntactic and semantic composition, in that the manner V1 is adjoined to the causative V2. Evidence for this analysis comes from reduplication, a narrow reading of *tetes* 'again' and root suppletion. As mentioned above, Daakaka make heavy use of suppletive transitivity marking on transitive verbs. Crucially, in Type-A-RSVCs only the causative V2 appears in its transitive form, whereas the manner V1 appears in its intransitive/unmarked form. Based on morphosyntactic constraints on root suppletion (Embick 2010), this pattern is only expected under an adjunction analysis, as the manner V1 would block Voice-driven suppletion on a more deeply embedded V2. Instead, root suppletion would be expected under a complementation analysis. Consequently, I conclude that the manner V1 merges as *v*P modifier to the causative *v*P, modifying the causing event entailed by the causative predicate. This analysis is supported by event semantic diagnostics, as discussed in chapter 6 on Samoan Type-B-RSVCs. However, Type-A-RSVCs contrast with Type-B-RSVCs because the internal argument of V1 is not projected at a syntactic level, allowing for object mismatches at the semantic level. Finally, I return to the serializing condition on causative verbs, hypothesizing that Daakaka lacks an interpretative rule allowing for an unmodified (covert) event variable to be existentially interpreted, as seen, for example, in English (lexical) causative verbs.

Chapter 9 concludes the thesis by summarizing the major contributions of this thesis to the study of resultative predication in Oceanic languages and beyond. On the one hand, Oceanic microvariation can be traced back to the language specific lexical inventory and morphosyntactic constraints on argument and event structure building. On the other hand, the morphosyntactic and semantic structure of Type-A and Typ-B-RSVCs further support the hypothesis that serializing languages exhibit the same split in the resultative domain, in terms of their predominant use of resultative secondary predication or means constructions. Finally, the study of the lexical semantics in the two Oceanic languages highlights

the significance of cross-linguistic research on yet understudied languages, as novel data from typologically diverse languages contributes to both formal and typological analysis of event and argument structure.

Part I: Resultatives – Syntax, semantics, and typology

Chapter 2: The distribution of manner and result

This chapter deals with the composition of verbal predicates in regard to their internal event structure. In the study of the internal organization of event denotations, verbal predicates are classified according to their underlying event structure, determined by whether they denote atomic eventualities, like actions (e.g. *hammer, wipe* or *sing*) and states (e.g. *flat, open* or *clean*), or more complex eventualities like causative accomplishments (e.g. *kill, break* or *flatten*). However, while these types of predicate are typically realized by a single root, in resultative construction, two roots are combined, each denoting an individual sub-event (e.g. *hammer flat*). In order to analyze the contribution of the respective roots, this chapter provides an overview of the distribution root meaning, its interaction with syntactic structure and the nature of causative event relation, serving as a background for the investigation of (Oceanic) resultative predicates in this thesis.

In section 2.1., I provide an introduction to the decomposition of verbal predicates according to their event structure, with a focus on bi-eventive accomplishment such as causatives, anticausatives and resultatives which all express a causative relation between two eventualities. While the event structure remains constant for verb classes, the root only contributes its own idiosyncratic meaning (Dowty 1979). In section 2.2, I explore a prominent split in root classes that is motivated by the complementary distribution of manner and result meaning components. By reviewing the main arguments for this split, I show that roots either modify the manner of an event or name the result state but never modify both simultaneously (Rappaport Hovav & Levin 1998). Adopting a syntactic approach to event composition, I argue that the relative position of the root with to the verbalizer *v* is responsible for its interpretation. Therefore, roots that appear in a modifying position (sister to *v*') receive a manner interpretation, whereas roots in the complement name the result state (Folli & Harley 2019, Embick 2009). In section 2.3, I discuss the relationship of (lexical) causatives and anticausatives, showing that these two types of causative predication only differ in the presence of an external argument (Alexiadou et al. 2015). Consequently, the *v*P can be identified as the locus where causative relations between two events are established. It also allows us to further determine the configurational requirement of certain root classes. In section 2.4, I briefly discuss the properties of periphrastic causatives, which are derived by a causative light verb and differ in their syntactic and semantic properties from lexical causatives.

2.1 Event (de-)composition

In lexical semantics, it has been observed that the meaning of verbal predicates can be paraphrased by analytical constructions (Beavers & Koontz-Garboden 2020, Levin & Rappaport Hovav 2005, Wunderlich 1997, Jackendoff 1990, Parsons 1990, Dowty 1979, Lakoff 1965 among others).[11] These analytical constructions reveal the basic internal structure of (complex) eventualities that can be lexicalized by a single verb. As illustrated in (41), a causative verb like *flatten* can be paraphrased by (41)b. Therefore, *flatten* denotes an event performed by the agent that causes a change of state for the object whose result state is named by the root.

(41) a. *Mary flattened the rug.*
b. *Mary caused the rug to become flat.* (Beavers & Koontz-Garboden 2020: 9)

Likewise, the anticausative variant of *flatten* excludes the agent and her causing action, merely denoting a change-of-state with the root denoting the result state.

(42) a. *The rug flattened.*
b. *The rug became flat.* (Beavers & Koontz-Garboden 2020: 9)

This periphrastic construction can be used in the context of other change-of-state predicates. This indicates that major difference between verbs like *flatten* and *dry* is the contribution of the root, i.e. $\sqrt{dry}$ and $\sqrt{flat}$.

(43) a. *Mary dried the rug.*
b. *Mary caused the rug to be dry.* (Beavers & Koontz-Garboden 2020: 9)

(44) a. *The rug dried.*
b. *The rug became dry.* (Beavers & Koontz-Garboden 2020: 9)

In contrast, verbs like *run* or *jog* can be paraphrased by *do X-ing actions*. The paraphrastic construction indicates that these verbs denote activities and do not entail a change of state. Here, the root specifies the type of action event that is carried out by an agent.

(45) a. *Mary jogged/ran.*
b. *Mary did jogging/running actions.* (Beavers & Koontz-Garboden 2020: 9)

[11] Note that periphrastic constructions do not necessarily have the very same semantics as the lexical predicates. Fodor (1970), for example, demonstrates that *kill* cannot be derived from *cause to die* as both expressions are felicitous in different contexts. Compare section 2.4 for the difference between lexical causatives like *kill* and periphrastic causatives like *cause to die*.

Based on the observation that paraphrastic constructions reflect more abstract types of (complex) predication, verb meaning can be divided into two parts: (i) so-called event structure templates built form the combination of grammatical primitives (also: structural verb meaning) and (ii) roots (also: idiosyncratic verb meaning; cf. Beavers & Koontz-Garboden 2020, Rappaport Hovav & Levin 1998, Dowty 1979). On the one hand, the inventory of grammatical primitives reflects predicates used in paraphrastic constructions. The grammatical primitives that will be relevant in this thesis are ACT, which denotes an abstract ACT(ion) event, and CAUSE, which introduces a causative relation between two eventualities (Dowty 1979).[12] On the other hand, while grammatical primitives are assumed to be universally constant, the combination of these primitives and the idiosyncratic contribution of roots may vary within and across languages according to root classes (e.g. Bohnemeyer 2007 on cross-linguistic variation in the cut-&-break-domain, Levin 1993 for a detailed classification of English verbs). In the following, I briefly introduce the event structure templates that will be relevant in this thesis.

There are two atomic event types that cannot be further decomposed to more primitive elements; namely *states* and *activities* (Rappaport Hovav & Levin 1998, Dowty 1979). A state describes a stative eventuality which is denoted by a (stative) root itself, whereas an activity includes an abstract ACT event that is modified by a (manner) root.

(46) a. State: [x < STATE >]
[door <OPEN>]
→ *The door is open./ The open door*

b. Activity: [x $ACT_{<MANNER>}$ (y)]
[Peter $ACT_{<PUSH>}$ (door)]
→ *Peter pushed the door.*

From these atomic eventualities and additional semantic operators, more complex event types can be built (cf. Koontz-Garboden 2012 on the unidirectionality of this process). For example, causative verbs like *open* can be decomposed in an underspecified ACT(ion) event and a state which are combined by the CAUSE operator that indicates a causative relation between the two eventualities. Note that the root names the result state only.

[12] Here, I follow Kratzer (2005) that CAUSE and BECOME can be unified to a single CAUSE operator, as the difference between CAUSE and BECOME does not reflect different types of change but refers to the source of the change. While causative (CAUSE-)predicates describe an externally caused change-of-state, inchoative or anticausative (BECOME-)predicates describe an internally caused change-of-state. Therefore, the distinction between the CAUSE and BECOME operator becomes obsolete (see also Alexiadou et al. 2006, Chierchia 2004, Levin & Rappaport Hovav 1995).

(47) Causative: [x ACT CAUSE [y <STATE>]]
[Peter CAUSE [door <open>]]
→ *Peter opened (the door).*

However, the presence of an ACT event distinguishes transitive causative verbs from intransitive (anti)causative verbs in that the latter do not introduce an agent and solely express a change-of-state of the object (cf. Alexiadou et al. 2006). I will come back to the relation between causative and anticausative predicates in section 2.3.

(48) Anticausative: [CAUSE [y <STATE>]]
[CAUSE [door <open>]]
→ *The door opened.*

Finally, in resultative constructions both the causing ACT event and the result state are realized by a root. One root (here: $\sqrt{push}$) modifies the manner of the ACT event, and another root names the resulting state (here: $\sqrt{open}$).

(49) Resultative: [[x $ACT_{<MANNER>}$] CAUSE [y < STATE >]]]
[[Peter $ACT_{<PUSH>}$] CAUSE [door <OPEN>]]]
→ *Peter pushed the door open.*

To summarize, there are two potential ways for roots to be integrated into event templates: (i) as modifiers of predicates denoting the manner of an activity or (ii) as arguments of predicates naming the result state in a change-of-state event.

A significant body of work has been devoted to the distribution of root (classes) in relation of the two structural positions in the event template. Prominently, Rappaport Hovav & Levin (2010) argue for two broad ontological root classes that are in complementary distribution. On the one hand, there are *manner* roots that modify an action event typically performed by an agent. This class also includes *instrumental* roots (cf. Anagnostopoulou 2017, Rappaport Hovav & Levin 1998).

(50) **Manner roots:**
Manner: *run, jog, push, wipe, etc.*
Instrument: *hammer, brush, saw, shovel, etc.*

On the other hand, there are result roots that occur primarily in the context of change-of-state predicates. This class of roots consists of *Property-Concept* (PC) roots that denote the result state, and *result* roots that modify the change event but entail a result state (cf. Beavers et al. 2017, Embick 2009, also Ausensi to appear).

(51) **Result roots:**

PC states: *small, clean, open, red,* etc.

Result: *break, froze, melt, bake* etc.

In the next section, I take a closer look at the semantic properties of roots and present a syntactic account of event decomposition.

2.2 Manner/result complementarity

Based on the distribution of manner and result components in verbal predicates, Levin & Rappaport Hovav (1991 et seq.) claim that monomorphemic verbs can only lexicalize either a manner or result component. This means that a root cannot function as an event modifier and event argument of the same event in a single verb.

(52) a. * [[x ACT$_{<\text{ROOT}i>}$] CAUSE [y < ROOT$_i$ >]]]

This observation is summarized in the principle of manner/result complementarity, which makes a strong prediction that in the world's languages, verbs that lexicalize manner and result simultaneously are impossible to find.

(53) **MANNER/RESULT COMPLEMENTARITY** (Levin & Rappaport Hovav 2008: 1)
Manner and result meaning components are in complementary distribution: a verb lexicalizes only one.

While the universality of manner/result complementarity in its strict interpretation has been challenged by some authors (e.g. Ausensi 2019, Beavers & Koontz-Garboden 2012, Husband 2011, Goldberg 2010), many studies support it as a general cross-linguistic tendency in various semantic domains such as change-of-state, motion/change-of-location and speech (Levin & Rappaport Hovav 2019, Gast et al. 2014, Alexiadou & Anagnostopoulou 2013, Mateu & Acedo-Matellan 2012, Talmy 2000 *inter alia*).

The distribution of meaning components has been shown to interact with the semantic and syntactic behavior of the respective verbs. In the following, I will discuss several diagnostics for the presence of a manner or result component in the lexical semantics of a verb, as discussed in Alexiadou et al. (2017), Beavers & Koontz-Garboden (2012) and Rappaport Hovav & Levin (2010).[13] These diagnostics will also be used in the

[13] Note that manner and result verbs are often assumed to differ with respect to their scalar properties: Whereas result verbs denote "events of a scalar change […] where a scale is a set of degrees […] on a particular dimension (e.g. height, temperature, cost), with an associated ordering" (Rappaport Hovav &

case studies on Samoan and Daakaka in part II and III. After this, I take a closer look at apparent variation in the lexicalization pattern of simple verbs. On the one hand, roots that modify the causing event can combine with an underspecified result state, for example, in result verbs like *break* or optionally causative manner verbs in French and Greek (Alexiadou et al. 2017, Anagnostopoulou 2017, Embick 2009). On the other hand, some roots can occur either as manner or result roots in different contexts, e.g. $\sqrt{cut}$ (Levin & Rappaport Hovav 2013). To account for these observations, I adopt a configurational analysis of manner/result complementarity, which states that the semantic type of a verb is determined by the syntactic position of the root in the derivation. If the root is merged as a modifier of the event-introducing categorizing *v* head, it is interpreted as modifier of the event, i.e. a manner verb, and if the root is merged in the complement position, it is interpreted as an argument of the event, i.e. a result verb (Folli & Harley 2019, Alexiadou et al. 2015, Mateu & Acedo-Matellan 2012, Embick 2009, 2004). For this thesis, this basic configuration will serve as the syntactic template for causative/resultative event composition.

2.2.1 Manner diagnostics

At first, I discuss three diagnostics that have been proposed as being sensitive to the presence of a manner component in the verb's meaning. These diagnostics focus primarily on the compatibility of verbal predicates with instruments and external arguments such as agents and causers. The general intuition is that if the verb has a manner component, the root that modifies this component restricts the combinatorial properties of the verb that refers to the manner of an event, e.g. agents and instruments. As result verbs do not have a manner component, they are expected to combine more freely with various types of

Levin 2010: 28), manner verbs denote events of non-scalar change. It has been observed that the presence of a scale tends to be related to the telicity of a predicate – scalar (result) predicates are often telic, while non-scalar (manner) predicates are not (Dowty 1979). Therefore, telicity has been proposed as a potential diagnostic for manner/result complementarity (e.g. compatibility with, and readings of, aspectual adverbials, such as in/for-adverbials; Dowty 1979, Beavers & Koontz-Garboden 2012). However, it has been highlighted that telicity interacts with the grammatical aspect and semantic properties of theme arguments (cf. Martin & Demirdache 2020, Rappaport Hovav & Levin 2010, Filip 2008, Filip & Rothstein 2006, Krifka 1998). During my field trip, I was not able to set up telicity as a reliable diagnostic for manner/result complementarity for two main reasons. On the one hand, due to the interaction of the grammatical and lexical aspect, it is necessary to control the influence of aspectual markers on the telicity of verbal predicates. As the aspectual system in both Samoan and Daakaka is fairly understudied, the contribution of aspectual markers is currently under investigation (see Hohaus 2016 on Samoan, von Prince 2019a, von Prince et al. 2019 on Daakaka). On the other hand, Samoan and Daakaka do not mark the contrast between *in-* and *for*-adverbials morphosyntactically such as in English (see Bohnemeyer 2015 on the challenges for elicitation of telicity in languages that lack a syntactic contrast). To avoid further complications, I excluded telicity as a diagnostic in the present study.

instruments and causers. Another test is motivated by the differences in the event structure of manner and result verbs. Based on the observation that each verbal sub-event must be related to an event participant, only mono-eventive manner verbs allow for object deletion, whereas bi-eventive result verbs do not. Therefore, these diagnostics are sensitive to a manner component.

2.2.1.1 Combinatorial restrictions with instruments

A first diagnostic builds on the observation that manner verbs are more restricted about the manner in which the action denoted by the verb is performed than result verbs. This intuition follows on from the hypothesis that the event denoted by the verb is modified by a lexical root in manner verbs only. In contrast, the nature of the event is left underspecified in result verbs. Therefore, only manner verbs are expected to be sensitive to instrumental modification, as the instrument must be satisfied by the action denoted by the verbal root (see Anagnostopoulou 2017, Rissman et al. 2015, Rissman 2015, Levin & Rappaport Hovav 2013, 2014, Rappaport Hovav & Levin 2010, 1998, Harley & Haugen 2007, Dowty 1991, Croft 1991, Talmy 1975).

This is illustrated by the examples below (cf. Levin & Rappaport Hovav 2011). In (54), the manner verb *wipe* only combines with instrumental modifiers that can participate in an action denoted by the root – a *cloth* or a *hand*, but not a *broom*. In contrast, result verbs like *clean* are not subject to such restrictions and allow various types of instruments, as long as the instrument can be thought to participate in a *cleaning*-event.

(54) a. *Peter wiped the table* ***with his hand*** */* ***with a cloth*** */ ** ***with a broom***.
b. *Peter cleaned the table* ***with his hand*** */* ***with a cloth*** */* ***with a broom***.

This diagnostic is most effective with instrumental verbs that entail the type of instrument involved in the activity by themselves, e.g. *rake* or *tape*. However, restrictions on instruments do not necessarily distinguish manner verbs from one another. In some cases, the root meanings differ in the degree of force used to carry out a particular event. For example, the manner verbs *wipe* and *scrub* both denote a 'wiping'-action on a surface, but *scrub* indicates that the event is performed with a higher degree of force. Still, result verbs are not sensitive to instruments, force or other means in which the result state is brought about. Therefore, combinatorial restrictions on the instrumental modification of verbal predicates indicates the presence of a manner component.

2.2.1.2 Combinatorial restrictions with external arguments

A second diagnostic comes from selectional restrictions on external argument roles such as agents, causers or instruments. The general observation is that while manner verbs select for agents only, result verbs are more flexible in permitting causers (such as inanimate/ natural forces) or instruments as their external arguments (Beavers & Koontz-Garboden 2020, 2012, Alexiadou et al. 2017, Alexiadou et al. 2015, Rappaport Hovav & Levin 2010, Schäfer 2008, van Valin & Wilkins 1996, Guerssel et al. 1985 *inter alia*). This contrast is shown in the examples below. While manner verbs such as *scrub* or *wipe* are infelicitous in the context of instrumental and causer external arguments, causative result verbs like *break* or *shatter* freely combine with all types of external argument.

(55) a. *John scrubbed/ wiped the floor with a stiff brush.*
b. *# The stiff brush scrubbed/wiped the floor.*
c. *# The earthquake scrubbed/ wiped the floor.* (Beavers & Koontz-Garboden 2012: 344)

(56) a. *John broke/ shattered the vase with a hammer.*
b. *The hammer broke/ shattered the vase.*
c. *The earthquake broke/ shattered the vase.* (Beavers & Koontz-Garboden 2012: 344)

Although most authors take this diagnostic to indicate the presence of a manner component (e.g. Beavers & Koontz-Garboden 2012, van Valin & Wilkins 1996), Schäfer (2012) suggests instead that it signals the absence of a result, as causer subjects become felicitous in the context of an overtly realized result state, e.g. in resultative secondary predication (cf. Travis 2005, Folli & Harley 2005). In German, for example, inanimate causers like *der Regen* 'the rain' are infelicitous in the context of manner verbs like *waschen* 'wash' (57), but not in the context of result verbs like *säubern* 'clean' (Martin & Schäfer 2014).

(57) a. *Peter wusch das Auto.*
Peter wash.PST ART Auto
'Peter washed the car.'

b. *# Der Regen wusch das Auto.* GERMAN
ART rain wash.PST ART car
Intended: 'The rain washed the car.'

(58) a. *Peter säuberte das Auto.*
Peter clean.PST ART car
'Peter cleaned the car.'

b. *Der Regen säuberte das Auto.* GERMAN
ART rain clean.PST ART car
'The rain cleaned the car.'

Crucially, when the manner verb *waschen* 'wash' appears in a resultative construction together with an overtly expressed result state (here: *sauber* 'clean'), causer external arguments become felicitous (59).

(59) a. *Peter wusch das Auto sauber.* b. *Der Regen wusch das Auto sauber.*GERMAN
Peter wash.PST ART car clean ART rain wash.PST ART car clean
'Peter washed the car clean.' 'The rain washed the car clean.'

Therefore, the presence of a result state in the event structure of the verbal predicate licenses a causer external argument. As proto-typical manner verbs lack such a result state, the availability of causer subject indicates that the respective verb is a result verb (but note that this generalization does not hold for all result verbs like *murder*; Beavers & Koontz-Garboden 2012; see section 2.3).

2.2.1.3 Deletion of the internal argument

A third diagnostic comes from object deletion which has been observed as being restricted to manner verbs. This has been extensively discussed as the *unspecified-object-alternation* in many Indo-European languages and beyond (Beavers & Koontz-Garboden 2017, 2012, Wittek 2011, Rappaport Hovav 2008, Levin 1999, 1993 and references therein, but see Rissman 2015, Mittwoch 2005, Goldberg 2001 for counterexamples). In English, for example, manner verbs such as *scrub* can appear as intransitive/unergative verbs with an existentially bound internal argument that is not overtly realized (Beavers & Koontz-Garboden 2012).

(60) a. *Kim scrubbed the floor.*
b. *All night, Kim scrubbed.*
c. *Kim scrubbed and scrubbed and scrubbed.* (Beavers & Koontz-Garboden 2012: 339)

In contrast, causative result verbs such as *break* must obligatorily realize their internal argument in the same contexts.

(61) a. *Kim broke the vase.*
b. **All night, Kim broke.*
c. **Kim broke and broke and broke.* (Beavers & Koontz-Garboden 2012: 339)

The distribution of object deletion has been attributed to the event structure of the verb – while mono-eventive manner verbs denote a single action event, bi-eventive causative result verbs denote both an action event and a (result) state. Therefore, Levin & Rappaport Hovav (2001) propose that each sub-event of the verb necessarily requires the presence of an argument (see Beavers & Koontz-Garboden 2017, Rappaport Hovav 2008 for a link to scalar properties of result verbs).

(62) **Argument-per-subevent condition;** (Levin & Rappaport Hovav 2001: 779):
There must be at least one argument XP in the syntax per subevent in the event structure.

As manner verbs entail only a single event, the object argument can be deleted, as the presence of the external argument satisfies the condition in (62). In causative result verbs, the external argument is the sole participant in the (causing) action subevent, but not in the (result) state. Therefore, object deletion violates the condition in (62), as the result state would be left without an argument XP. Consequently, the felicity of object deletion separates manner from result verbs. However, in section 5.4.1.3, I show that object deletion is only an applicable diagnostic in languages where object deletion is generally available – which arguably is not the case in Samoan (cf. also Williams 2012 on Igbo).

2.2.2 Result diagnostics

In this section, I present four diagnostics that are sensitive to the presence of a result component in the verb's meaning. As result verbs necessarily denote a change-of-state, most diagnostics relate to the presence of a result state in the event structure of the verb. This includes (i) the ability to form anticausative predicates, (ii) the licensing of a restitutive reading of 'again', (iii) restriction on resultative secondary predicates and (iv) the denial of a result. Some of these diagnostics are subject to cross-linguistic variation.

2.2.2.1 Deletion of the external argument

This diagnostic is the counterpart to object deletion as it refers to the omission of the external argument. It has been noted that in Germanic, and most Romance languages, result verbs alone can form intransitive/unaccusative verbs that demote the external argument (Alexiadou 2017, Alexiadou et al. 2015, Koontz-Garboden 2009, Schäfer 2008, Haspelmath 1993, Guerssel et al. 1985 and many more). In English, for example, result verbs like *open* can appear in causative and anticausative contexts (63) whereas manner verbs like *wipe* cannot drop their external arguments (64). [14]

(63) a. *Peter opened the window.* CAUSATIVE
b. *The window opened (by itself).* ANTICAUSATIVE

[14] This does not hold true for all causative result verbs, as a subgroup of verbs that combine with highly specified external arguments do not form anticausative verbs, e.g. *kill*-verbs (Beavers & Koontz-Garboden 2020, Ausensi 2019, Schäfer 2009, Levin & Rappaport Hovav 1995, Haspelmath 1993).

(64) a. *Peter wiped the table.* MANNER
b. * *The table wiped (by itself).* *ANTICAUSATIVE

However, this observation is not without exception, as many verbs such as *clean*, which clearly have a result component according to other diagnostics, do not participate in the causative alternation. Instead, *clean* is always a transtive causative verb (Levin & Rappaport Hovav 2013; see section 2.3.2 on different root classes of result verbs).

(65) a. *Peter cleaned the table.* CAUSATIVE
b. * *The table cleaned.* *ANTICAUSATIVE

In addition, cross-linguistic data suggests that the deletion of the external argument is not necessarily a diagnostic for result verbs. In Brazilian Portuguese, for example, manner verbs can form a so-called anti-agentive construction, in which the agent is omitted although the verb does have a result component (Carvalho 2016, see also Martin et al. 2020 on Mandarin, Bhatt & Embick 2017 on Hindi/Urdu). In (66), the verb *lavar* 'wash' qualifies as a manner verb according to standard diagnostics, including the absence of causer subjects (66)b or a restitutive reading of 'again'.[15] Yet, these verbs can form intransitive anti-agentive verbs that do not introduce any external argument (66)c.

(66) a. *O João lav-ou a roupa.* BRAZILIAN PORTUGUESE
ART John wash-PST.3SG ART cloth
'John washed the clothes.'

b. # *O vento lav-ou a roupa..*
ART wind wash-PST.3SG ART cloth
Intended: 'The wind washed the clothes.'

c. *A roupa lav-ou*
ART cloth wash-PST.3SG
'The clothes got washed.' (lit. 'The clothes washed.'; Carvalho 2016: 61)

Notably, anti-agentive verbs are not an instance of passive constructions as the agent argument is not accessible for agentive *by*-phrases.

[15] Note that the causer subject in (66) b may be infelicitous for other reasons. In most languages, 'wash' implies the use of water. Therefore, *chuva* 'rain' seems more likely to be felicitous as a causer subject of *lavare*. This can be shown in German where causer subject can occur with manner verbs in resultative contexts, only if they match the manner component of the manner verb (59).
(i) # Der Wind wusch die Straße sauber.
ART wind wash.PST ART street clean
Intended: 'The wind washed the street clean.'
However, all other diagnostics also indicate the absence of a result component in anti-agentive verbs. This observation is not crucial for the argumentation.

(67) * *A roupa lay-ou pelo João.* BRAZILIAN PORTUGUESE
ART cloth wash-PST.3SG by.ART John
Intended: 'The cloth was washed by John.' (Carvalho 2016: 62)

This shows that in some languages, transitive manner verbs can have anti-agentive forms, just as causative result verbs can have anticausative forms. Therefore, argument deletion in general requires a careful examination of the language specific properties of argument realization, which can also vary with respect to root classes (cf. section 2.3.2).

2.2.2.2 Restitutive 'again'

A more reliable diagnostic for the presence of a result component comes from the availability of a restitutive reading of repetitive modifiers such as 'again', which are sensitive to the internal event structure of verbal predicates (see section 6.3.2.1 for more detailed discussion; Lechner et al. 2015, Alexiadou et al. 2015, Beck & Snyder 2001a, von Stechow 1996, Dowty 1979, cf. Spathas & Michelioudakis 2020 on additive modifiers, Rapp & von Stechow 1999 on 'almost'). In many languages, 'again'-like repetitive modifiers license two readings in the context of bi-eventive accomplishment verbs: (i) a restitutive reading, i.e. restoring a prior state, and (ii) a repetitive reading, i.e. performing the action that caused the respective result state for a second time.

(68) [**AGAIN**$_{\text{REPETITIVE}}$ [x ACT CAUSE [**AGAIN**$_{\text{RESTITUTIVE}}$ [y < ROOT >]]]]

In contrast, mono-eventive manner verbs do not license a restitutive reading as they do not lexicalize a result component. Therefore, only a repetitive reading of 'again' is available in the context of manner verbs (Beavers & Koontz-Garboden 2020, 2012, Alexiadou et al. 2017 *inter alia*).

(69) [**AGAIN**$_{\text{REPETITIVE}}$ [x ACT$_{\text{<ROOT>}}$ (y)]]

In English, for example, result verbs like *open* license both a repetitive and restitutive reading of *again*. In the repetitive reading in (70)a, *again* introduces a presupposition that the door was previously opened by John, including both the underspecified causing action and the resulting state. In the restitutive reading in (70)b, only the previous state of the door being is presupposed.

(70) *John opened the door again.*
a. Repetitive: John has opened the door before.
b. Restitutive: The door was open before.

Manner verbs like *wipe* can only license a repetitive reading in which the adverb scopes over the action denoted by the verb (71)a. The unavailability of a restitutive reading indicates the absence of a result component.

(71) *Peter wiped the table again.*
   a. Repetitive: John wiped the table before.
   b. # Restitutive

Therefore, 'again' can be used to diagnose the presence of a result state in the event structure of the verbal predicate. However, this observation does not necessarily exclude the possibility that the root acts as a manner modifier, as it has been shown that event modifying roots can also appear in bi-eventive contexts (i.e. (optionally) causative manner verbs; Alexiadou et al. 2017, Anagnostopoulou 2017, also Embick 2009 on result verbs like break; see section 2.2.3 and 5.4.3 for causative manner verbs in Samoan).

2.2.2.3 Restricted resultatives

A further diagnostic comes from the combinatorial restriction in resultative constructions. For languages that exhibit resultative secondary predication such as English, it has been observed that manner verbs are less constrained with regard to result state, denoted by the secondary predicate, than result verbs (Ausensi to appear, Goldschmidt 2018, Alexiadou et al. 2017, Beavers & Koontz-Garboden 2012, 2020, Rappaport Hovav & Levin 2010, Tortora 1998, Tenny 1994, Goldberg 1991 etc.). This is illustrated by the manner verb *scrub* in (72) which combines with a wide range of secondary predicates.

(72) a. *Cinderella scrubbed the table* ***clean/shiny/bare.***
   b. *Cinderella scrubbed her knees* ***sore.***
   c. *Cinderella scrubbed the dirt* ***off the table.***
   d. *Cinderella scrubbed her house-cleaning competitors* ***out of the room.***
   (Beavers & Koontz-Garboden 2012: 340)

In contrast, a result verb like *dim* is much more restricted in taking only secondary predicates that further specify the result state denoted by the verb itself, i.e. the intensity of light. This explains why the secondary predicate *to the level of starlight* is felicitous while *empty* or *sore* are not.

(73) a. *Then, the biologists dimmed the room* ***to the level of starlight.*** (Rappaport Hovav 2008: 23)
   b. *#We dimmed the room* ***empty****.* (Rappaport Hovav 2008: 23)
   c. *#Kim dimmed her eyes* ***sore****.* (Beavers & Koontz-Garboden 2012: 340)

In the context of result verbs derived from PC-roots this restriction is even more obvious, as such verbs typically reject every kinds of resultative secondary predicate (Embick 2009).

(74) a. * *John cleaned the table* ***dry****.*
b. * *Mary opened the door* ***into pieces****.*

This constraint – also known as the "unique path constraint" (Goldberg 1991) or "single delimiting domain" (Tenny 1994) – has been related to scalar properties of result verbs (Beavers 2008, Rappaport Hovav 2008, Wechsler 2005, also Goldschmidt 2018; cf. FN1). Thus, if a verb lexically specifies a scale – e.g. light-intensity in example (73) above, only predicates that make reference to the same scale can be combined. As result verbs alone denote events of scalar changes, this constraint does not hold true for manner verbs (Rappaport Hovav & Levin 2010, Kennedy & McNally 2005, Krifka 1998 among others).

2.2.2.4 Denial of result

A further diagnostic for the presence of a result component is the infelicity of the denial of a result. In the context of result verbs, the negation of a change-of-state leads to a contradiction, because the change-of-state is part of the verbal meaning. In contrast, manner verbs do not lexicalize a change-of-state and are felicitous in this context (Beavers & Koontz-Garboden 2020, 2012, Beavers 2011, Kratzer 2000, Rappaport Hovav & Levin 1998, but see Husband 2018 for concerns on the reliability of this diagnostic). This is illustrated below, where a potential impact of the action can be denied in the context of manner verbs like *hammer, wipe* and *sweep* (75), but not in the context of result verbs like *break, shatter* or *destroy* (76).

(75) a. *Peter just hammered the metal, but the metal was not affected.*
b. *Peter just wiped the table, but the table is still dirty.*
c. *Peter just swept the floor, but there is nothing different about it.*

(Beavers & Koontz-Garboden 2012: 337)

(76) a. *Shane just broke the vase, # but it is not broken.*
b. *Shane just shattered the bottle, # but is not shattered.*
c. *Shane just destroyed his house, # but it is not destroyed.*

(Beavers & Koontz-Garboden 2012: 337)

Although this seems to be a reliable diagnostic in languages like English, its cross-linguistic application can provide inconclusive results. For some languages, it has been

shown that the denial of a result is actually felicitous with causative verbs in agentive contexts (Martin & Demirdache 2020). In Mandarin and Indonesian, for example, result verbs like *shāo* 'burn' or *membunuh* 'kill' can co-occur with clauses that deny result state introduced by the verbal predicate without contradiction. [16]

(77) a. *Yuēhàn shāo le tā-de shū, dàn gēnběn méi shāo-zháo.* MANDARIN
Yuehan burn PFV 3SG-DE book but at.all NEG.PFV burn-ignite
Literally: 'Yuehan burned his book, but it didn't get burned at all.' (Martin et al. 2020: 2)

b. *Budi membunuh Ali, tapi dia tidak mati.* INDONESIAN
Budi kill Ali but 3.SG NEG dead
'Budi killed Ali, but he isn't dead.' (Sato 2019: 2)

This phenomenon is called *defeasible causatives* and has been described in a number of unrelated languages of various language families, such as Asian (e.g. Martin et al. 2020 on Mandarin, Beavers & Lee 2020 on Korean), Austronesian (e.g. Paul et al. 2016 on Malagasy, Sato 2019 on Indonesian, Dell 1983/1984 on Tagalog), Salish languages (Jacobs 2011 on Skwxwú7mesh), and also Indo-European languages such as German and French in specific environments (Martin & Schäfer 2017, Koenig & Davis 2001, Oehrle 1976). In section 5.4.2.4, I show that Samoan causatives also belong to this group.

2.2.3 Variations on a theme: Causative manner verbs and root polysemy

The diagnostics for the distribution of manner and result components in verbal predicates are summarized in Table 1. The pattern reflects the assumption of manner/result complementarity, as verbs show morphosyntactic and semantic sensitivity to the presence of the respective meaning components in their event structure. In the case studies on Samoan and Daakaka in chapter 5 and 7 respectively, these diagnostics are applied to verbal predicates, revealing some unexpected variation to the English data discussed here.

[16] There is a general question as to why certain causative predicates allow for non-culminative readings. Recent studies on the defeasibility of causative accomplishments suggest that the locus of non-culmination may be related to different sources (see Martin & Demirdache 2020 for a detailed overview). For example, Martin & Schäfer (2017) have argued that the zero-change reading of causative predicates such as *enseigner* 'teach' in French results from sub-lexical modality (cf. Koenig & Davis 2001, also Sato 2019 on Indonesian, Paul et al. 2016 on Malagasy). Yet, non-culmination in Mandarin arises either from the interpretation of the aspectual marker *le*, or non-maximality-readings of the determiner *yì* on incremental theme arguments (Martin et al. 2020).

	Manner (mono-eventive)	**Result** (bi-eventive)
Restrictions on instrumental modifiers	Yes	No
Restrictions on external arguments	Yes (agent)	No
Object deletion	Yes	No
Denial of result	Yes	No
Agent deletion	No	Yes
Restitutive reading of 'again'	No	Yes
Restricted resultatives	No	Yes

Table 1: Diagnostics for the distribution of manner and result components.

However, the cross-linguistic picture is more complex, in that verbs may show certain properties of both manner and result verbs, as indicated in the previous sections. For example, some verbs qualify as manner verbs by modifying an (action) event and simultaneously entailing an underspecified result state (e.g. optionally causative manner verbs like *laver* 'wash' in French or non-derived result-verbs like *break* in English; Alexiadou et al. 2017, Embick 2009, also Ausensi to appear, Anagnostopoulou 2017). In addition, other verbs like English *cut* are polysemous in functioning both as manner and result verbs in different contexts (Levin & Rappaport Hovav 2013). In the following, I briefly review English *break*- and *cut*-type verbs, showing that they do not violate the manner/result complementarity, but help us to refine the notion of the distribution.

Firstly, English *break*-type verbs have been analyzed as result verbs that name the result state caused by an (action) event. However, *break*-type verbs differ from prototypical result verbs such as *darken, open* or *flatten* which are derived from stative PC-roots in several respects (Beavers et al. 2017, Embick 2009). On the one hand, *darken*-type result verbs have underived stative forms (78), whereas *break*-type verbs have not (79). Instead, stative forms of *break*-type verbs express target states, i.e. states caused by an event such as *broken* (Kratzer 2000, Parsons 1990).

(78) a. *Peter opened the door.* ↔ *The door is open.*
b. *Mary flattened the metal.* ↔ *The metal is flat.*
c. *The organizer darkened the room.* ↔ *The room is dark.*

(79) a. *Peter broke the window.* ↔ *The window is broken/ *break.*
b. *Mary froze the popsicles.* ↔ *The popsicles are frozen/ *freeze.*
c. *The child cracked the vase.* ↔ *The vase is cracked/ *crack.*

On the other hand, *break*-type result verbs cannot function as the result-denoting predicate in resultative constructions with verbs of creation (80), while *darken*-type result verbs can (81) (Embick 2004). Crucially, this constraint is shared with target states of *darken*-type result verbs (e.g. *darkened*).

(80) a. ?/* *This part of the machine was built broken.*
b. ?/* *These jeans were made torn.*
c. ?/* *The wood on the frame was built snapped.* (Embick 2009: 15)

(81) a. *The door was build open/ *opened.*
b. *The new models were made dark/ *darkened.*
c. *These new devices were built long/ lengthened.* (Embick 2009: 15)

This observation suggests that *break*-roots obligatorily derive bi-eventive verbs as they entail an event in all their forms (Beavers & Koontz-Garboden 2020, Beavers et al. 2017, Embick 2009). Thus, the question is whether the root in *break*-type verbs modifies the causing sub-event or the result state. The restrictions of resultative secondary predication provide significant insights into the event structure of the different types of result verbs (see section 2.2.2.3). While *break*-types verbs license a secondary predicate that specifies the result state, *darken*-type verbs reject resultative secondary predication altogether.

(82) a. *Mary broke/ cut/ split the package open.*
b. * *John opened/ darkened/ blackened DP RSP.* (Embick 2009: 7)

Embick (2009) concludes that *break*-type roots are predicates of events that obligatorily combine with a silent, underspecified result state. This result state is interpreted as being caused by the event, which is modified by the root, i.e. a *breaking* event. Consequently, these verbs have a result component that is not modified by the root itself (Alexiadou et al. 2017 on optionally causative manner verbs in French, Anagnostopoulou 2017 on Greek). *break*-type result verbs are the counterpart to *darken*-type result verbs which leave the causing event underspecified. In section 5.4, I show that this phenomenon is commonly observed in Samoan, even with prototypical action verbs like *solo* ‘wipe’

Secondly, roots like *cut* seem to lexicalize both manner and result components according to the standard diagnostics discussed in the last section. For example, *cut* appears in the conative construction like other manner verbs that express surface contact, such as *kick*. Result verbs cannot appear in a conative construction (Rappaport Hovav & Levin 2010, Goldberg 1995, Levin 1993, but see Bohnemeyer 2007 for counterexamples).

(83) a. *Finally, she got the blade pulled out and started* ***cutting at*** *the tape on Alex …*
(Levin & Rappaport Hovav 2013: 54)

b. *John* ***kicked at*** *the wall.*

c. **Mary* ***broke at*** *the dishes.*

Yet, *cut* can also form anticausative predicates on par with result predicates like *break*. Crucially, true manner verbs in English like *wipe* cannot be used as anticausative verbs.

(84) a. *Suddenly, the rope* ***cut*** *and he fell down the well.* (Levin & Rappaport Hovav 2013: 55)

b. *The window* ***broke****.*

c. * *The table* ***wiped****.*

Additionally, in zero-nominalization the nominal refers to the result of an action *a cut* and not to the action itself. This observation is shared with other result verbs (85)a, but not with other manner verbs that refer to the action and not the result (85)b.

(85) a. *break*$_V$/ *a break*$_N$, *crack*$_V$/ *a crack*$_N$, *split*$_V$/ *a split*$_N$

b. *(give it) a wipe*$_N$*„ (give it) a kick*$_N$*„ (go for) a walk/run*$_N$
(Levin & Rappaport Hovav 2013: 54)

Therefore, at first glance, this mixed behavior seems to contradict manner/result complementarity. However, Levin & Rappaport Hovav (2013) demonstrate that *cut* can denote either a manner or a result, but not both at the same time. Their crucial observation is that *cut* entails a manner component, i.e. an action performed by an agent with a sharp-bladed instrument, only in the conative construction and not in the other contexts. Therefore, *cut at* cannot be used to describe a situation where such a manner is absent.

(86) Peter is dropping the fruit onto the blade from sufficient height.

a. *Peter cut an orange.*

b. **Peter cut at an orange.* (inspired by Bohnemeyer 2007: 159)

Significantly, the absence of a manner component in (86)a correlates with the presence of a result component as the sentence implies that the orange is cut – which is, of course not the case in the conative construction.

Moreover, Levin & Rappaport Hovav (2013) show that *cut* as a result verb does not even entail the use of an instrument. In (87), the *rope* is not cut by a sharp-bladed instrument but on a rock. Therefore, *cut* in its result use simply refers to a clean separation.

(87) *The rope cut on the rock releasing Rod on down the mountain.*

(Levin & Rappaport Hovav 2013: 55)

Still, as *cut* is strongly associated with a conventional manner, Levin & Rappaport Hovav (2013) assume that this strong association licenses the manner form in the case of the dropping out. In section 7.4.2, I show that this type of manner/result ambiguity is also found in the Oceanic language Daakaka. Here, some roots like *tiwiye* can form both manner and result verbs whereby in the manner form, they denote action that proto-typically causes the result state denoted by the causative form. As with the English *cut*, the manner use does not entail a change-of-state.

To summarize, neither *break*-type verbs nor *cut*-type verbs apparently violate the manner/result complementarity. Instead, investigation of the critical cases helps us to refine the notion of manner/result complementarity. While a single root cannot modify a manner component and a result component at the same time, this does not imply that the respective unmodified component is not part of the verb meaning, i.e. *darken*-type result verbs leave the causing event underspecified, whereas *break*-type result verbs leave the result state underspecified. Moreover, result roots may be ambiguous in that they can modify the manner or result component if they are strongly associated with a certain manner, i.e. *cut*-type roots.

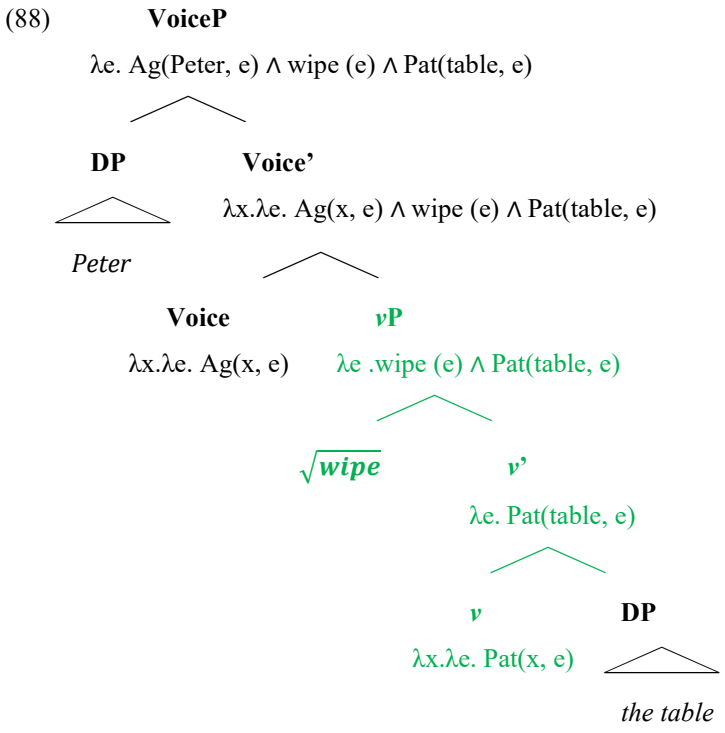
2.2.4 A configurational account

Adopting a syntactic approach on event composition, the distinction between manner and result verbs boils down to the morphosyntactic configuration in which the respective root appears (Folli & Harley 2019, Alexiadou et al. 2015, Mateu & Acedo-Matellan 2012, Embick 2009, 2004, cf. also Ramchand 2008). With the assumption that roots are a-categorial and do not introduce their own event-variable, roots modify an event variable that is introduced by the verbal categorizer *v*. Therefore, the interpretation of the root is determined by its relative position to the *v* head. If a root is merged as an adjunct/specifier of *v*, the root is interpreted as an event modifier, and if a root is merged in the complement position, it is an interpreted as an event argument (Folli & Harley 2019, Alexiadou & Lohndal 2011, Embick 2009, 2004 etc.). Consequently, manner/result complementarity

reflects the syntactic position of the root in relation to *v*. In the following, I present the syntactic and semantic derivation of both manner and result verbs.

The structure of (transitive) manner verbs is given in (88). Bottom up, the eventive verbal categorizer $v_{<e>}$ introduces an underspecified event variable *e* and merges with an internal argument DP, forming an event with a patient (cf. Alexiadou et al. 2015, Wood 2015, Marantz 2013b).[17] Subsequently, the underspecified event variable *e* is modified by a root (here: $\sqrt{wipe}$) that merges as an event-modifier at the *v*'-level and incorporates into the *v* head for categorization purposes (Folli & Harley 2019, Alexiadou & Lohndal 2011, pace Embick 2004 on manner roots directly merging to the head).[18] Finally, a Voice projection is merged on top of the *v*P. The Voice head introduces agentive semantics and licenses the external argument DP in its specifier (via Event Identification; Alexiadou et al. 2006, Kratzer 1996). The mono-eventive nature of manner verbs is reflected by the single event-introducing *v* head in the structure.

(88)



[17] Note that the combination with an internal argument DP is optional in the context of many manner verbs as discussed in section 2.2.1.3. Moreover, in the context of unergative verbs like *run* the internal argument does not seem to be realized at all – though it has been proposed that unergative verbs are underlyingly transitive (Hale & Keyser 1993). Different accounts also vary as to whether they located the internal inside or outside of the *v*P (cf. Lohndal 2014, Borer 2005a, b, also Alexiadou & Schäfer 2011).

[18] In the present system, it is not entirely clear by which semantic mechanism the root contributes its predicational content to the semantic derivation. As the root by itself does not come with its own event variable, a combination via standard operations like Predicate Modification, as proposed by Folli & Harley (2019), does not seem to work here. However, this question arises for all frameworks that assume a-categorial roots, which is why I do not discuss this point further here.

With regard to the event structure of causative result verbs, I adopt the view that causative result verbs exhibit a bi-eventive structure entailing both a causing subevent and a result state (Harley 2008, Pylkkänen 2008, Alexiadou et al. 2006, Kratzer 2005, Marantz 1997, Pustejovsky 1991 among others). This assumption contrasts the tri-partite analysis of causatives that decompose causative result verbs into a causing and a change subevent and a result state (e.g. Ramchand 2008, Travis 2005, Hale & Keyser 1993, Parsons 1990). However, the behavior of manner adverbs provides strong evidence for bi-eventive analysis (Martin & Schäfer 2014). Manner adverbs modifying a lexical causative verb necessarily scope over the subject's action in lexical causatives. Instead, a change-denoting sub-event is not accessible for manner adverbs (Pylkkänen 2008, Fodor 1970). For example, in the context of the lexical causative verb *sink* (89)a, the manner adverb *slowly* can only refer to the causing action; i.e. Peter did something slowly that caused the ship to sink, and not Peter did something that caused the ship to sink slowly (cf. Higginbotham 2000). Crucially, the latter reading is available in anticausative predicates (89)b and periphrastic causatives (89)c which are ambiguous (cf. section 2.4 on the internal structure of periphrastic causatives).

(89) a. *Peter sank the ship slowly.*
b. *The ship sank slowly.*
c . *Peter made the ship sink slowly.* (Martin & Schäfer 2014: 220)

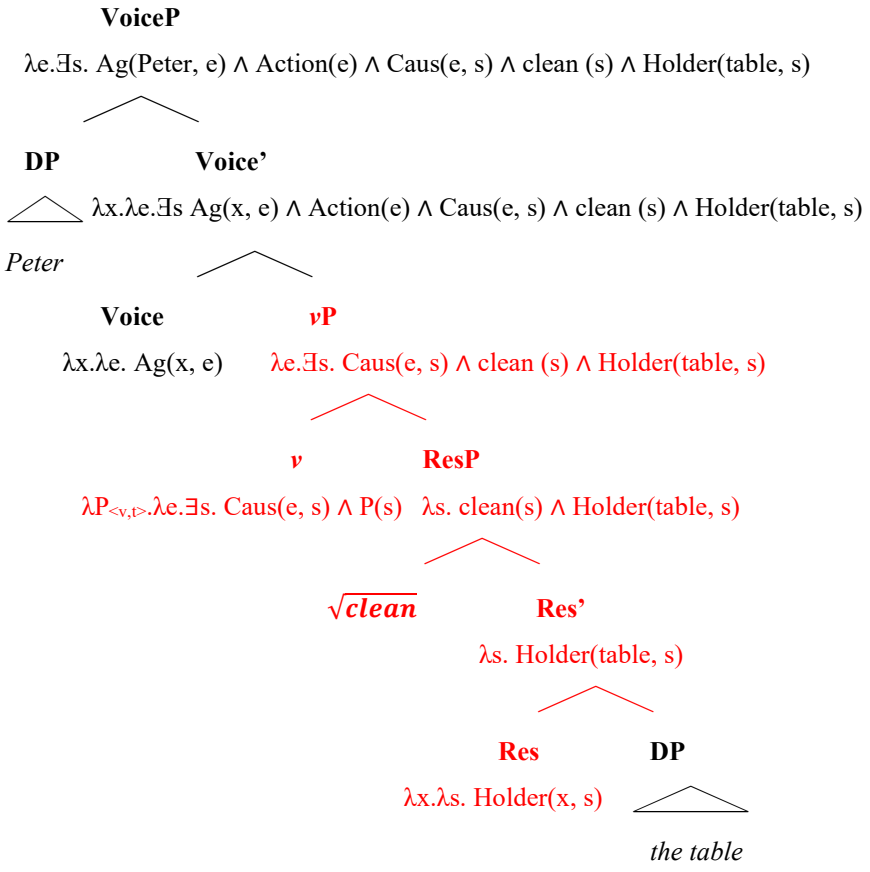
As manner adverbs unambiguously modify a single event in the context of lexical causatives, the assumption of a change subevent in the event structure of causative result verbs seems superfluous.[19]

Below, I present the syntactic derivation of the two types of result verbs. Firstly, in *darken*-type result verbs, the a-categorial functional Res(ult) head introduces an underspecified state variable *s* and combines with an internal argument DP, which assigns a

[19] Note that it is not the case that lexical causatives are simply opaque for adverbial modification of subevents within the verb. As shown in section 2.2.2.2, causative verbs allow the modification of the result state by functional adverbs such as *again*, *almost* or additive operators like Greek *ke* 'also' (cf. Spathas & Michelioudakis 2020, Lechner et al. 2015, Pylkkänen 2008, Beck 2005, Rapp & von Stechow 1999, Dowty 1979). In addition to the repetitive and restitutive reading, *again* seem to license an intermediate reading taking only of the change event in its scope.
(i) a. *John opened the door again and he opened the door before.* REPETITIVE
b. *John opened the door again and the door opened before.* INTERMEDIATE
c. *John opened the door again and the door was open before.* RESTITUTIVE
While this reading seems to challenge a bi-eventive analysis of lexical causative verbs, Alexiadou et al. (2015) point out that the intermediate reading can be accomodated in a bi-eventive analysis of lexical causaitve verbs. With the assumption that external arguments are introduced separately from the causing event, the intermediate reading occurs when *again* attaches before the external argument, i.e. to the *v*P below Voice (resulting in VoiceP, vP and ResP as potential attachment sites for again; cf. Lechner et al. 2015).

holder theta role at the CI-interface.[20] The PC-root *clean* merges as a state modifier at the Res' level. The resulting ResP is merged in the complement position of the eventive verbalizer *v* that categorizes the a-categorial ResP (via incorporation which is not shown in the structure for reasons of simplicity). As *v* also introduces an underspecified event variable *e*, this event forms a telic pair with the state denoted by the ResP. This configuration receives a causative interpretation at the CI-interface (Alexiadou et al. 2015, Higginbotham 2000). The external argument is introduced by a Voice head that merges on top of the causative *v*P. In this configuration, the yet underspecified causing event is contextually interpreted as an action event by the presence of (agentive) Voice (Alexiadou et al. 2015).

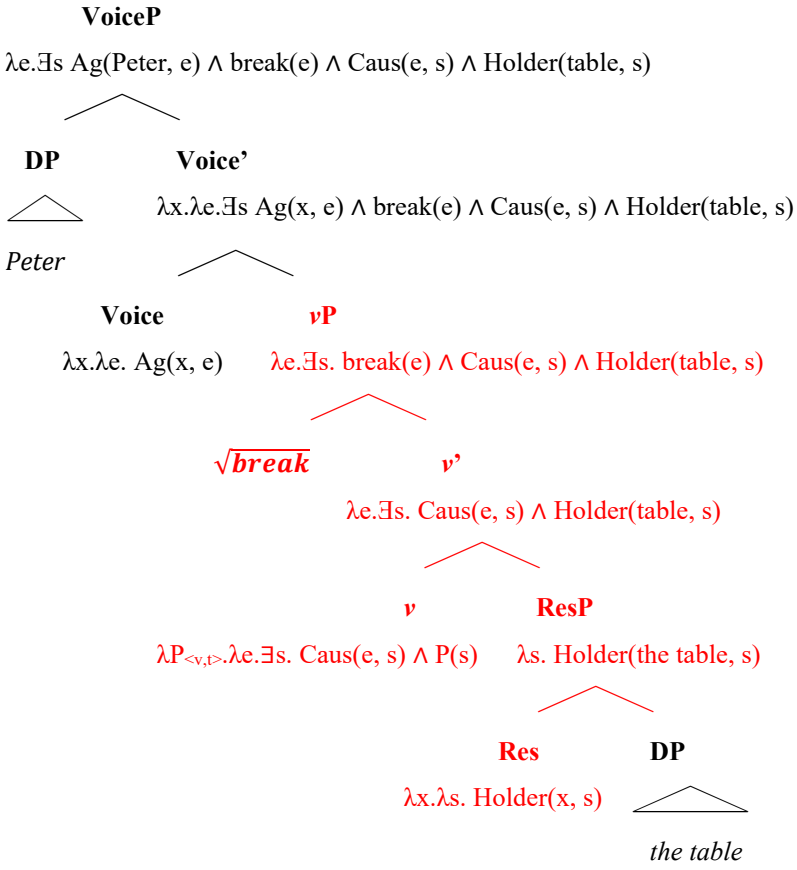
(90)



[20] Note that there is some discussion as to whether the internal argument of result verbs is introduced within ResultP, in the specifier of *v*P or both. Alexiadou & Schäfer (2011) propose that there is some variation across verb classes based on the availability of *there*-insertion. While *there*-insertion is possible with change-of-location verbs like *arrive*, it is not possible in the context of change-of-state verbs like *break*.
(i) a. *There arrived a man in the garden.* b. **There broke a glass (in the kitchen).*
With the assumption that *there* is merged in Spec, *v*P, Alexiadou & Schäfer (2011) propose that this asymmetry arises from the position of the internal argument which blocks *there*-insertion in the context of change-of-state verbs, but not in the context of change-of-location verbs.
(ii) a. *arrive* → [$_{vP}$ [$_{ResP}$ internal argument]] b. *break* → [$_{vP}$ internal argument [$_{ResP}$]]
In this thesis, I assume that the internal argument is introduced within the ResP. The location and the interpretation of the internal argument in lexical causatives and resultative secondary predication is discussed in more detail in section 3.1.2.

Secondly, in *break*-type result verbs, the root merges in the event modifying position, i.e. as a sister to *v*' like manner roots. In contrast to manner roots, *break*-type roots can only occur in the structural presence of a result state. As this result state does not need to be overtly realized, I adopt the view that *v* can combine with an underspecified 'proxy state', represented by an unmodified ResP (Embick 2009, see also Alexiadou et al. 2017, Anagnostopoulou 2017 for implementation of this idea in related contexts). This ResP introduces the result state and the internal argument, and combines with the causing event introducing *v* head. As ResP does not contain a root, it does not need to be categorized and allows for an additional root to merge as an event-modifier.

(91)



Finally, *cut*-type roots which are ambiguous, in that they can either modify the causing event or specify the result state, are able to merge in either of the two positions (see Ausensi to appear for a similar implementation of *break*-type roots). If the root merges within a ResP, it specifies the result state, if it merges as a modifier, it modifies the causing event introduced by *v*. Therefore, the respective interpretation of the root is determined by the structural position of the root.

The distribution of the root class depends on their encyclopedic information that lists the syntactic configuration(s) in which the root can appear. Based on the discussion

in this section, three basic root classes can be identified in this context (Embick 2009, see also Alexiadou et al. 2015, Rappaport Hovav & Levin 1998 *inter alia*).

(92) a. $\sqrt{darken\ type}$ → Predicate of states
b. $\sqrt{pound\ type}$ → Predicate of events; can't occur with ResP
c. $\sqrt{break\ type}$ → Predicate of events; must occur with ResP (Embick 2009: 17)

In conclusion, the investigation of the distribution of manner and result components in verbal predicates shows that a single root can only specify one of them in a verbal predicate. Therefore, the specification of manner and result is in complementary distribution with a monomorphemic verb lexicalizing only the one or the other. By adpopting a configurational syntactic approach to event (de)composition, the relative position of the root determines its interpretation. In the complement position of *v*, the root (within a ResP) denotes the result state of a causing event, and in the modifying position (as a sister of *v*'), it modifies the event introduced by *v*. Consequently, roots fall into two broad ontological classes, according to whether they are predicates of events or predicates of states. In addition, the configurational context in which the root can appear might be further determined by its encyclopedic entry, e.g. *break*-type roots require a syntactically projected (underspecified) result state in the structure. In the following two sections, I take a closer look at syntactic structure causative result verbs, with respect to argument structure and root classes.

2.3 Anticausatives as causatives

This section investigates the internal structure of causative predicates, with a focus on the locus of causative semantics and the interaction between root classes and argument structure. Therefore, I focus first on anticausative predicates, recapitulating the analysis of Alexiadou et al. (2015, 2006) and Schäfer (2007) who demonstrates that anticausative predicates differ from causative predicates primarily in the presence of external argument introducing Voice head. Therefore, both types of causative predicate are built on the same underlying structural configuration (see also Schäfer 2012, Koontz-Garboden 2009, Kallulli 2006, Chierchia 2004, Levin & Rappaport Hovav 1995). Based on the observation that the modification of the causing event is still possible in anticausatives by eventive, but not agentive adjuncts, the *v*P can be analyzed as being the locus of causative relation between eventualities. Moreover, I briefly discuss the relation of root class and argument structure alternations, showing that the possibility to omit the external argument

is primarily determined by the encyclopedic entry of the root, rather than being tied to event structure. This assumption is based on the observation that some causative verbs do not participate in the causative alternation in English, while even manner verbs may form intransitive, anti-agentive verb forms lacking an external argument in languages like Brazilian Portuguese (Carvalho 2016). Consequently, cross-linguistic variation is expected according to root determined argument and event structure, but not in terms of the syntactic configuration.

2.3.1 *v*P as the locus of causative semantics

As shown in section 2.2.2.1, most result verbs in English are subject to the causative alternation in exhibiting both transitive/causative and intransitive/anticausative variants of the same verb. Crucially, both verb forms refer to a change-of-state in the object (cf. Koontz-Garboden 2009, Schäfer 2009 and references therein).

(93) a. *Peter broke the window.*
b. *Mary flattened the metal.*

(94) a. *The window broke.*
b. *The metal flattened.*

One of the central questions in the study of anticausative predicates is the status of the demoted argument. In that, anticausatives are similar to passive constructions which also lack an overt realization of the external argument (95). Comparing these two structures, Alexiadou et al. (2015, 2006) demonstrates that while the passive still entails agentive semantics, anticausatives do not.

(95) a. *The window was broken.*
b. *The window was flattened.*

Crucial evidence for this assumption comes from the distribution of *by itself*, which is available in the context of anticausatives but not in the context of passives (cf. Chierchia 2004, Levin & Rappaport Hovav 1995). Alexiadou et al. (2015) argue that the *by itself* phrase expresses that its antecedent was not (directly or indirectly) caused to participate in the event denoted by the predicate. In transitive contexts such as in (96)a, *by x-self* signals that nothing external caused the agent to break the door. Likewise, in the context of an anticausative predicate such as (96)b, *by-itself* indicates that no direct or indirect

cause is responsible for the breaking of the door. Note that this reading is not available in the transitive context in (96)a, as the opening of the door is caused by John.

(96) a. *John broke the door by himself / *by itself.*
b. *The door broke by itself.*
c. *The door was broken *by itself.* (Alexiadou et al. 2015: 22)

In passive contexts like (96)c, *by itself* is not felicitous, as its antecedent, the door, is caused by the implicit external argument of the passive verb form. Therefore, the presupposition introduced by the semantics of *by itself* contradicts the presence of a causing argument. Alexiadou et al. (2015) conclude that while a Voice projection is present in passive construction that introduces the external argument role, it is absent in anticausative verbs.

Although anticausatives reject agentive external arguments, they can co-occur with non-agentive, eventive causers that modify the causing event in the event structure of anticausative predicates. This indicates that agents and eventive causers are licensed by different functional layers, namely Voice and *v* (Alexiadou et al. 2015, Solstad 2009). This is shown for English below, where causative verbs license all types of external arguments, including agents, causers and instruments.

(97) a. *Peter broke the window.*
b. *A storm broke the window.*
c. *A stone broke the window.* (Alexiadou et al. 2015: 30)

If the causative predicate occurs in the passive, all types of external arguments that occur in the active context can still be introduced via a prepositional *by-phrase*, as shown in (98). This is expected with the assumption that both active and passive verb forms entail a Voice layer that introduces all kinds of subjects (but see FN23 for potential complications in the contexts of causer and instrumental subjects).

(98) a. *The window was broken by John. / with a stone.*
b. *The window was broken by the storm.*
c. *The window was broken by a stone.* (Alexiadou et al. 2015: 31)

Crucially, anticausatives do not license agent, causer and instrumental arguments introduced via a *by*-phrase. With that, anticausatives differ from their transitive and passive forms, further supporting the absence of a Voice projection in their syntactic structure. [21]

[21] Note that in specific contexts an eventive *by*-phrase may be felicitous with anticausatives (see FN32).

(99) a. * *The window broke by John / with a stone.*
b. * *The window broke by the stone.*
c. * *The window broke by the storm.* (Alexiadou et al. 2015: 31)

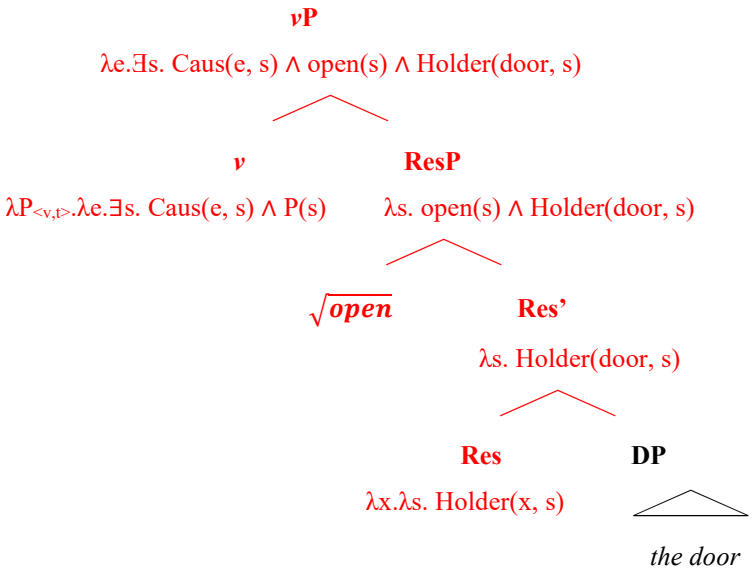
However, unlike agents or instruments, eventive causer can be introduced by a prepositional *from*-phrase (100).

(100) a. *The window cracked / broke from the pressure.*
b. *The window cracked / broke from the explosion.*
c. * *The door opened from Mary/ from the key.* (Alexiadou et al. 2015: 31)

This observation suggests that, underlyingly, anticausatives are causative predicates regarding their event structure, and entail a causing event, which can be modified by the *from*-phrase, as well as a result state. In addition, the infelicity of agentive arguments indicates that the agents and causers are licensed by different functional projection.

To conclude, Alexiadou et al. (2015) demonstrate that the causative alternation is, in fact, a Voice alternation. Therefore, causative and anticausative predicates differ, not in their event structure, but in the presence of agentive semantics. By assuming that agentive semantics are introduced by Voice (Kratzer 1996), causative and anticausative predicates primarily differ in the presence or absence of a Voice head.[22] The syntactic configuration of anticausative predicates is given in (101).

(101)



[22] As discussed in detail by Schäfer (2007), languages that exhibit overt Voice morphology in the context of anticausative predicates (like in German, Greek or Hebrew) merge a thematic Voice head on top of the *v*P (also Kastner 2020, Nie 2020). However, this thematic Voice head introduces neither an external argument nor agentive semantics. As Voice morphology is absent in anticausative constructions in the languages I am discussing in this thesis, I do not go into detail here.

While agentive and instrumental arguments saturate the agent theta role introduced by Voice, eventive causers modify the causing event in (anti)causative predicates (Solstad 2009). As such, eventive causer PPs are not licensed by the Voice head but by the causative semantics of the *v*P, and are merged as event modifiers in the designated position (sister to *v*'). In that, event causer PPs resemble event modifying manner and result roots that are merged in the very same position. This is illustrated by the syntactic configuration in (102). [23]

[23] In addition to PP-causers, Alexiadou (2014) and Alexiadou & Anagnostopoulou (2019) argue that eventive DP-causer are also merged as *v*P-modifiers, in the context of internally caused change-of-state (ICCOS) verbs in English and Greek, and object experiencer psych verbs in Greek. The observation is that ICCOS verbs like *blossom* can take a restricted set of causer subjects that enable the internally caused change-of-state. Other types of causer and agent are infelicitous (cf. Rappaport Hovav & Levin 2012).

(i) a. *The tree blossomed.*
b. *Early summer heat blossomed fruit trees across the valley.*
c. * *The wind blossomed the fruit trees.*
d. * *The farmer blossomed the fruit trees.*

As these verbs do not otherwise show agentive properties, e.g. they do not allow passivization, Alexiadou (2014) concludes that ICCOS verbs lack a Voice layer and causer DPs are merged within the *v*P, modifying the causing event entailed by the verb. Yet, most change-of-state verbs introduce causer DPs outside of the *v*P by Voice. In this position, they are still licensed by the causative *v*P, which raises further questions on the semantics of the Voice head in the context of causer DPs (Schäfer 2012, Solstad 2009). Martin (2020) addresses this issue in proposing that causer DPs are introduced by a designated $\text{Voice}_{\text{CAUSE}}$ head that establishes a causal relation between the causer and the event denoted by the verbal predicate. In contrast, agents and instruments cannot occur within the *v*P as they cannot act as modifiers of the causing event.

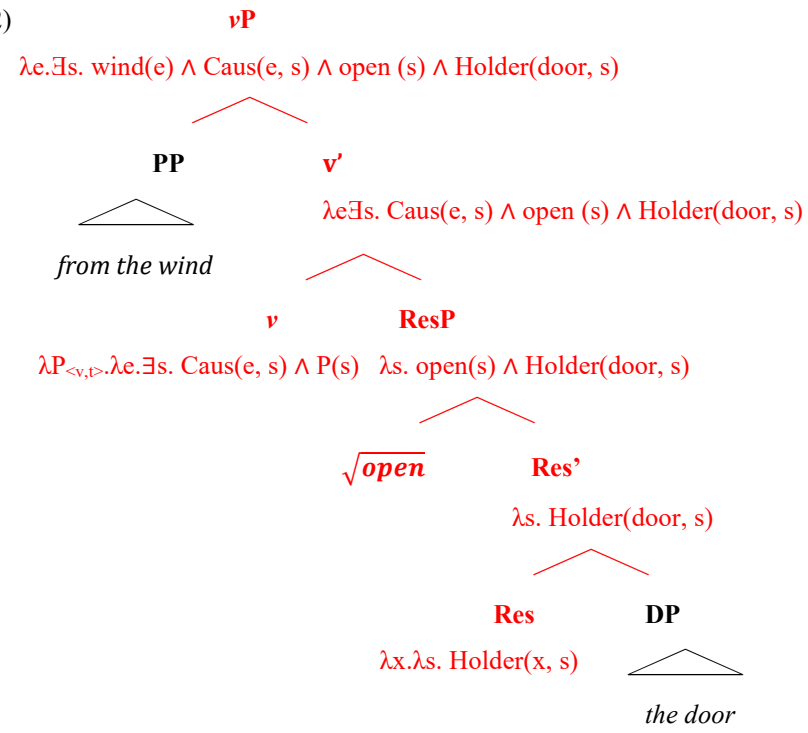
However, Schäfer (2012) shows that in German, human causer DPs can appear either with unmarked nominative case (ii)b or oblique dative case (i)a, in the context of causative verbs like *zerbrechen* 'to break'.

(ii) a. *Dem Man zerbrach die Vase.* b. *Der Man zerbrach die Vase.*
ART.DATman broke.3SG.PST ART.NOM vase ART.NOM man broke.3SG.PSTART.ACCvase
'The man unintentionally caused the vase to break.' 'The man broke the vase.' (Schäfer 2012: 140)

Crucially, the case marking gives rise to different interpretations: While nominative causers are conceptualized as 'true' agents, oblique causers are instead conceptualized as the abstract source of the event that unintentionally initiates the causing event. Therefore, Schäfer (2012) argues that oblique causers in German are introduced by an Applicative head in the absence of Voice.

Although these two phenomena show that the distribution of subject DPs in transitive causative verbs may vary across verb classes and languages, they still support the assumption that only eventive causers can occur within the *v*P, where they modify the causing event introduced by the verbal predicate. Nonetheless, the mapping of causer DPs onto the syntactic structure is still an ongoing topic which needs to be addressed carefully by additional (cross-linguistic) research.

(102)



2.3.2 Root classes and argument structure

Although the external argument is licensed outside of the *v*P, not all causative verbs participate in the causative alternation. As briefly mentioned in section 2.2.2.1, some causative verbs like *clean, destroy* or *murder* require the presence of an external argument and cannot be used intransitively (cf. Beavers & Koontz-Garboden 2020, Ausensi 2019, Alexiadou et al. 2015, Marantz 1997, Levin & Rappaport Hovav 1995, Haspelmath 1993)

(103) a. *#The policemen murdered.*
b. *#The house destroyed.*
c. *The door opened.*
d. *The tree blossomed.*

In the literature, this distribution has been related to the type of causation that is denoted by the verbs (cf. Alexiadou et al. 2015, Reinhart 2002, Levin & Rappaport Hovav 1995, Hale & Keyser 1993, Haspelmath 1993, Levin 1993). On the one hand, verbs like *murder* or *destroy* refer to eventualities that are externally caused and cannot occur spontaneously, i.e. this clas of verbs require some external cause (104)a,b. This class of verb does not have anticausative forms. Moreover, *murder*-type verbs additionally restrict the source of external causation to agents only. In contrast, verbs like *open* do not refer to the type of causation and combine freely with all types of external argument. These verbs can

also be used anticausatively (104)c. Furthermore, *blossom*-type verbs denote highly spontaneous events that are usually not caused by externally causation. Verbs of this class primarily occurs as anticausative predicates, which can only combine with a highly restricted set of natural causers (104)d.

(104) a. *The criminal/ #The storm /#The gun murdered the policeman.*
b. *The army/ The storm /The bomb destroyed the house.*
c. *Mary/ The storm/ The key opened the door.*
d. *#Mary/ The sun / #The sprinkler blossomed the trees.*

Based on the distribution of external arguments, English causative verbs can be stored in the encyclopedia under four different classification (Alexiadou et al. 2015, Harley & Noyer 2000, Marantz 1997, Levin & Rappaport Hovav 1995). Crucially, only roots that do not specify for an external argument can undergo the causative alternation.

(105) a. √agentive (murder, assassinate)
b. √cause underspecified (break, open)
c. √externally caused (destroy, kill)
d. √internally caused (blossom, wilt) (Alexiadou et al. 2015: 54)

As encyclopedic meaning is highly idiosyncratic, cross-linguistic variation is expected to take place at this level. In Greek, for example, *destroy*-verbs like *katastrafike* enter the causative alternation, in contrast to its English counterpart (Alexiadou et al. 2015).

(106) *To paketo katastrafike apo mono tu.* GREEK
ART package destroy.NACT by self his
'The package got destroyed by itself.' (Alexiadou et al. 2015: 58)

This type of variation is not restricted to result verbs. Recent studies suggest that manner verbs can also occur without an external argument. For example, *wash*-type verbs in Brazilian Portuguese can occur as anti-agentive verbs denoting the manner of an event in the absence of an external argument (Carvalho 2016, also Martin et al. 2020, Bhatt & Embick 2017 on Hindi/Urdu, cf. Williams 2014 on Mandarin and Igbo, Aboh 2009 on Gungbe for discussion in the context of verb serialization).

(107) *A roupa lav-ou* BRAZILIAN PORTUGUESE
ART cloth wash-PST.3SG
'The clothes got washed.' (lit.: 'The clothes washed.'; Carvalho 2016: 61)

Consequently, the investigation of the argument and event structure of verb classes requires a careful examination of the morphosyntactic and semantic properties, as roots can differ significantly across languages.

2.4 A note on periphrastic causatives

Finally, causative semantics can be expressed by periphrastic causatives. Unlike lexical causatives, periphrastic causatives involves a causative light verb, such as *make*, *cause, let* etc., together with a result denoting XP. Crucially, the result denoting XP in periphrsattic causatives comes with more syntactic structure up to VoiceP. This allows periphrastic causatives to take all kinds of verbal complements, including anticausatives, unergative and transitive verb phrases (Pitteroff 2014, Tubino Blanco 2011, Wood 2011, Kozinsky & Polinsky 1993, Fodor 1970 among others).

(108) a. *Peter made the boy dance.*
b. *Mary made Peter open the door.*
c. *The wind made the door open.*

As briefly mentioned in section 2.2.4, periphrastic causatives differ from lexical causatives in that their event structure is accessible for adverbial modification by manner adverbials like *quickly* and *slowly* (Martin & Schäfer 2014, Tubino Blanco 2011, Higginbotham 2000, cf. Fodor 1970). While these adverbs unambiguously scope over the causing event in the context of lexical causatives, they are ambiguous in the context of periphrastic causatives. In the preverbal position (109)a, the adverb scopes over the causing sub-event, i.e. the action that Peter did to sink the ship. In clause-final position, the adverb scopes over the change sub-event only, i.e. the ship sinks slowly (109)b (Tomioka 2006).

(109) a. *Peter slowly caused the ship to sink.*
b. *Peter caused the ship to sink slowly.*

The availability of the two readings in periphrastic causatives suggests that both events are individually represented at the syntactic and semantic level (contra lexical causatives; cf.Tomioka 2006, Fodor 1970 among others for equivalent observations in the context of temporal and locational adverbs as well as the means construction).

Moreover, periphrastic causatives differ from lexical causatives in allowing intermediate causers to intervene between the causer and the cause (e.g. Martin & Schäfer

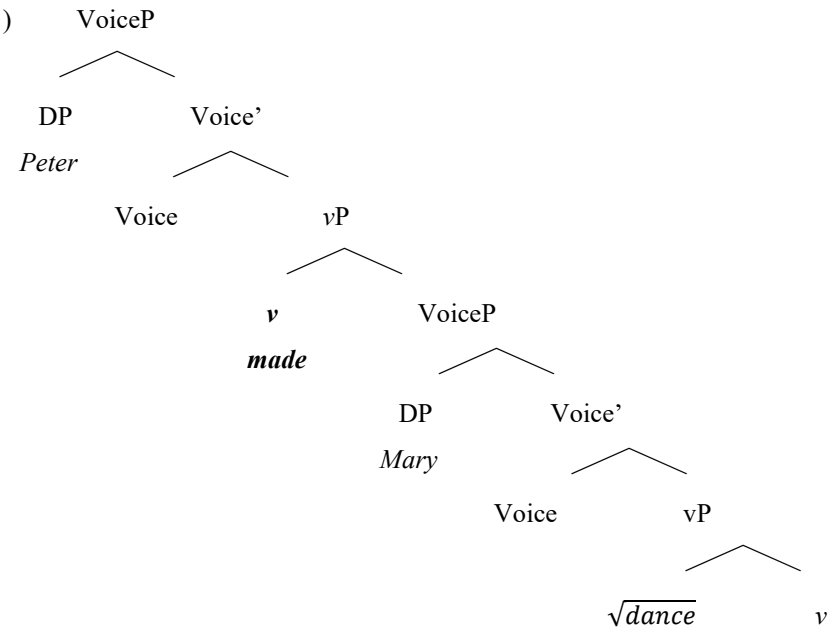
2014, Wolff 2003, Fodor 1970). This is illustrated by the examples in (110) (taken from Wolff 2003).

(110) a. *Mary opened the door.*
b. *Mary caused the door to open.*

Leixcal caustives are preferred in the situation where Mary *directly* opens the door by physical contact, e.g. by pushing the door (110)a (cf. Levin 2020, Bittner 1999, Shibatani 1976). Periphrastic causatives, instead, are also felicitous when Mary *indirectly* opens the door, e.g. she opens a window, a breeze entered the room and opened the door (110)b (see also Kratzer 2005). However, a direct causation interpretation is still available. In section 3.1.2 and 3.4, I discuss in more detail the notion of directness in causative predication, in the context of resultative secondary predication. The relevant observation here is that lexical and periphrastic causatives differ in their interpretation.

Morphosyntactically, causative light verbs have been analyzed as the spell-out of the *v* head that introduces the causing event in the absence of an incorporated root (e.g. Hopperdietzel to appear, Biggs & Embick 2019, Wood 2011, also McIntyre 2012). In contrast with lexical causatives, periphrastic causatives embed pre-categorized eventive complements up to the VoiceP level. Therefore, periphrastic causatives can take *v*P or VoiceP sized complements, including unergative and transitive verbs (Akkuş to appear on Sason Arabic sa, Pitteroff 2014 on German lassen, Wood 2011 on Icelandic latá, Folli & Harley 2007 on Romance faire among others). The structure of periphrastic causatives is given in (111), where the causative light verb *make* takes a VoiceP complement *Mary dance.*

(111)



Cross-linguistically, there are two main points of structural variation that will become relevant in the analysis of causative and resultative structures in this thesis. On the one hand, Pylkkänen (2008) shows that languages may exhibit morphological causatives, i.e. derived causative verbs, that not only embed a root as in English *darken*-type causatives, but also *v*P and VoiceP complements like periphrastic causatives in English, as discussed above (cf. Harley 2017; see section 5.3 for a detailed overview). Therefore, morphological causatives in these languages can be derived anticausative, unergative as well as transitive verbs. This is illustrated by Chemehuevi *tu'i-* and Karachay-Balkar *tyr*-causatives below (Lyutikova & Tatevosov 2014, Serratos 2008).

(112) a. *Umi-k manga-y na'üntci-tci-a wünümi-**tu'i**-yü.* CHEMEHUEVI
2SG-COP DEM-OBL girl-NPN-OBL dance-CAUS-PRES
'You are making the girl dance.' (Serratos 2008: 276)

b. *Ana-sy alim-ge baxca-sy-n sür-**dür**-dü.* KARACHAY-BALKAR
mother-3 Alim-DAT field-3-ACC plow-CAUS-PST.3SG
'The mother made Alim plow the field.' (Lyutikova & Tatevosov 2014: 283)

Significantly, these types of morphological causatives behave like English periphrastic causatives with respect to adverbial modification by manner adverbs, as a separate modification of the respective sub-events is felicitous (contra English lexical causatives; Pylkkänen 2008). This is shown for Chemehuevi causatives below (Serratos 2008). In (113)a, the manner adverb *pitangas* 'quickly' appears in preverbal position where it scopes over the caused event, i.e. the boy's running. In (113)b, the adverb occurs in post-

subject position and modifies the causing event, i.e. the action of the speaker ('I'). Therefore, according to this diagnostic, English periphrastic causatives and Chemehuevi morphological causatives exhibit the same behavior.

(113) a. *Nüüka manga-y aipa-tci-a* ***pitangas*** *nukwi-kai-**tu'i**-ka-tü* CHEMEHUEVI
1SG-COP DEM-OBL boy-NPN-OBL quickly run-PERF-CAUS-PERF-NMLZ
'I made the boy run quickly.'

b. *Nüül* ***pitangas*** *manga-y aipa-tci-a nukwi-kai-**tu'i**-ka-tü*
1SG-COP quickly DEM-OBL boy-NPN-OBL run-PERF-CAUS-PERF-NMLZ
'I quickly make the boy run.' (Serratos 2008: 276)

Moreover, morphological causatives that embed VoiceP complements are felicitous in contexts of indirect causation (e.g. Lyutikova & Tatevosov 2014 on Karachay-Balkar, Lomashvili 2011 on Georgian, Arkadiev & Letuchiy 2009 on Adyghe, Serratos 2008 on Chemehuevi). In Karachay-Balkar, for example, *tyr*-causatives derived from unergative and transitive verbs can appear in both direct (114)a, i.e. without an intermediate causer, and indirect causation (114)b, i.e. with an intermediate causer (here: the coach who is not overtly realized; Lyutikova & Tatevosov 2014).

(114) *Ustaz alim-ni erišü-le-de cap-**tyr**-dy.* KARACHAY-BALKAR
teacher Alim-ACC competition-PL-LOC run-CAUS-PST.3SG
a. 'The teacher made Alim run at the competition (e.g. by pushing him on the lane).'
b. '(Having convinced the coach that Alim is a good runner), the teacher organized Alim's running at the competition.' (Lyutikova & Tatevosov 2014: 284)

This shows morphological causatives that embed non-root complements pattern with English periphrastic causatives, in terms of their morphosyntactic and semantic behavior. Consequently, the crucial difference between English-type periphrastic causatives and VoiceP-embedding morphological causatives is the incorporation of the complement into causing event-introducing *v* head.

On the other hand, languages can differ in their inventory of causative light verbs. Thereby, languages like English have a comparatively small set of causative light verbs that are semantically vague, e.g. *let*, *make, cause*, *get*, *become* etc. (cf. Lauer & Nadathur 2020, McIntyre 2012, 2005). However, other languages like Wagiman (Baker & Harvey 2010), Gungbe (Aboh 2015a) or Persian (Folli et al. 2005) exhibit a more elaborate inventory of causative light verbs which often have full lexical variants. Although the semantic contribution of these verbs is semantically bleached when they functions as light

verbs, they can still contribute some additional semantic information about the manner of the causing event.[24]

(115) a. *Sɛ́tù* ***xò*** *dàn lɔ́ hù.* GUNGBE
Setu beat/hit snake DET kill
'Setu hit the snake to death.' (Aboh 2018: 4)

b. *Menuny burbur bak-ø ga-ba-**du**-n* WAGIMAN
maybe wing break-PFV 3SG.SUBJ.PRS-3PL.OBJ-cut-PRS
'Maybe they break its wings by cutting them.' (Baker & Harvey 2010: 29)

c. *Nima Homa-ro be gerye* ***andâxt*** PERSIAN
Nima Homa-râ to crying dropped
'Nima made Homa (start to) cry.' (Folli et al. 2005: 1378)

In sum, periphrastic causatives differ significantly from lexical causatives with respect to their morphosyntactic and semantic properties, as they allow a separate modification of their subevents and can express indirect causation.

2.5 Summary

In the first part of this chapter, I have discussed the distribution of manner and result meaning components in the event structure of verbal predicates. The crucial observation to make is that verbs fall into two broad classes, according to the lexicalization of one of these meaning components by a root which are in complementary distribution. On the one hand, the root modifies the manner of the eventive component of proto-typical mono-eventive manner describing an action event (i.e. *wipe*). On the other hand, in proto-typical bi-eventive result verbs, the root names the result state which is caused by an underspecified event (i.e. *darken*). Adopting a syntactic approach to event structure, I propose that the respective interpretation of the root follows from its position in the structural configuration in the decomposed verb. Therefore, if a root adjoins to the event introducing verbal categorizer it is interpreted as an event modifier (i.e. a manner root), whereas if a root merges in the complement position of *v* within a pre-categorial Res(ult)P, it is interpreted as an event argument naming the result state (i.e. a result root). However, I have shown that root classes can differ significantly with respect to the requirements on the structural

[24] Note that the event structure and interpretation of these constructions can only be anticipated, as the diagnostics presented in this chapter have not been applied to these types of causative constructions yet. In future research, it would be interesting to check their interaction with adverbial modification like *again* or *slowly/quickly* and whether they can encode indirect causative relations between the subevents.

configuration they can appear in, within and across languages (i.e. the presence of a result state in *break*-type verbs or an external argument in externally caused result verbs). Therefore, it is important to determine the morphosyntactic and semantic properties of root classes in the language of study.

In the second part of this chapter, I focus on the event structure of causative predicates. In exploring the causative alternation, I have shown that transitive causative and unaccusative anticausative forms differ primarily in the presence of an external argument introducing Voice head. Based on the availability of eventive causer PP in the context of anticausative verbs, I have adopted a unified analysis that treats anticausatives as underlyingly causative verbs. Therefore, I have identified the *v*P layer as the host of causative semantics, where a causative relation between two eventualities – the causing event and the result state – is established. Evidence for the absence of an intermediate change event comes from adverbial manner modification which can only target the causing but not the change event. In this property, monoclausal lexical causatives differ significantly from biclausal periphrastic causatives which allow for such a reading. Notably, this observation correlates with the semantic interpretation of the causative relation (direct vs. indirect) and the morphosyntactic size of the embedded eventuality (state vs. event). In the following chapter, I turn to resultative construction that combines manner and result components within a complex predicate.

Chapter 3: Two types of resultative constructions

While the last chapter focused on the argument and event structure of simple predicates derived from a single root, this chapter focuses on resultative complex predicates. In resultative constructions, both subevents of a causative event relation are specified by a root. This is exemplified in (116) for the sentence *Peter hammered the metal flat*. Here, the manner root $\sqrt{hammer}$ modifies the action sub-event, whereas the PC-result root $\sqrt{flat}$ names the caused result state.

(116) [[Peter ACT$_{\langle \text{HAMMER} \rangle}$] CAUSE [metal <FLAT>]]]

Compared with causative predicates, resultative constructions share, in terms of adverbial modification and the type of causation (i.e. direct causation), a significant number of different properties with lexical causatives, but not with periphrastic causatives (Levin 2020, Kratzer 2005, Bittner 1999 *inter alia*). Based on this observation, I develop a unified syntactic analysis of causatives and resultatives, in which resultatives differ from (lexical) causatives with both structural positions, i.e. modifier and complement, being filled with lexical material (Folli & Harley 2019, Mateu 2012b, Kratzer 2005, Embick 2009, 2004 among others, also Ramchand 2008). Under the condition in which a single event-introducing verbalizer *v* can only categorize a single root, either the manner or result component is expected to be realized by a pre-categorized XP, e.g. *a*P, PP, etc. As predicted, both types of resultatives are found in the world's languages. On the one hand, there is resultative secondary predication in which the result component is realized by an adjectival secondary predicate (117)a. On the other hand, there are the *means* constructions in which the manner component is realized by a prepositional adjunct (117)b.

(117) a. *Peter **hammered** the metal **flat**.*
b. *Peter **flattened** the metal **by hammering** it.*

In section 3.1, I explore the argument and event structure of resultative secondary predicates and the complex predicate's relation to lexical causatives with whom it shares crucial semantic and syntactic properties. Hereafter, I focus on the nature of the internal argument, arguing that it is obligatorily introduced by the secondary predicate in the complement position of the verb (Folli & Harley 2019, Mateu 2012a, Embick 2004 inter alia, also Ramchand 2008, Larson 1991, Hoekstra 1988 for related proposals). In this context,

I take a closer look at the directness of causation that has a significant influence on the interpretation of internal argument. Finally, I turn to intransitive resultative, and suggest that the requirement for external argument in resultative construction is determined by the verbal root.

In section 3.2, I focus on the *means* construction in which the manner component of a lexical causative predicate is modified by an adjunct, e.g. an eventive *by*-phrase in English (Sæbø 2016, 2008, Solstad 2009, Truswell 2007a, b, Bennet 1994, Davidson 1963, Anscombe 1957 *inter alia*). In line with Sæbø (2008) and Solstad (2009), I propose a configuration analysis in which the adjunct is merged as an event modifier to the eventive *v* head in causative configurations. Therefore, the means adjunct saturates the underspecified event variable of the lexical causative predicates in the same way as an event modifying (manner) root. Consequently, resultative secondary predication and the *means* construction differ primarily in the syntactic size of their respective meaning components.

In section 3.3, I show that both languages can be classified according to the type of construction that is primarily used to describe resultative meaning (Folli & Harley 2019, Mateu & Acedo-Matellan 2015, Talmy 2000). While satellite-framed languages realize the manner component in the verb and the result component in a secondary predicate (i.e. the *satellite*), verb-framed languages realize the result component by lexical causative verbs, with the manner component specified by a *means* adjunction. In discussing the typology of resultative predication, I take a closer look at serializing languages in which both the meaning components are realized by verbal predicates, and suggest that these languages can be explained by a refined definition of the traditional classification.

3.1 Resultative secondary predication

In resultative secondary predication, the matrix verb denotes the manner of action that causes a result state realized by a secondary predicate. While the result state is usually denoted by an adjectival or prepositional phrase, there is (usually) no overt marking of the causal relation between the two predicates (Iwata 2020, Goldberg & Jackendoff 2004, Rothstein 2004, Embick 2004, Levin & Rappaport Hovav 2001, Simpson 1983, Green 1972, Halliday 1967 and many more, see Beavers 2012 for an overview of the literature on resultative secondary predication).

(118) a. *Peter hammered the metal flat.*
b. *John smashed the glass into pieces.*
c . *Mary drank the teapot empty.*
d. *The egg broke open.*

In the following sections, I focus on the event and argument structure as well as the interpretation of the causative relation between the two subevents. In the first section, I compare resultative construction to (lexical) causative construction in relation to adverbial modification, before investigating the nature of the internal argument which also bring us back to the analysis of causative predicates. Within this framewrok, I present a definition of direct causation in opposition to indirect causation, that builds on the absence of intermediate entities. Finally, I turn briefly to the status of the external argument, whose presence is determined by the matrix predicate.

3.1.1 Resultatives and lexical causatives

Resultative secondary predicates in languages like English and German have, in terms of their argument and event structure, been described as sharing their properties with lexical causatives (Levin 2019, Kratzer 2005, Levin & Rappaport Hovav 2001, Rappaport Hovav & Levin 1998, Goldberg 1995, Dowty 1979, Bittner 1999, Pustejovsky 1991). At the first glance, this seems surprising given the fact that their surface structure resembles periphrastic causatives in which the result-denoting predicate is realized separately from the matrix (light) verb (see section 2.4).

(119) a. *Peter made the ship sink.*
b. *Peter caused the door to open/ be open.*

However, taking a closer look at the morphosyntactic and semantic properties of resultative secondary predication, striking similarities with lexical causatives become visible. Firstly, resultative secondary predication patterns with lexical causatives, with respect to the scope of manner adverbs like *quickly* and *slowly*. As discussed in the previous chapter, manner adverbs obligatorily scope over the causing event in the context of lexical causative predicates but are ambiguous in the context of periphrastic causatives in additionally scoping over the change event. Crucially, adverbial modification in the context of resultative secondary predication is not ambiguous, and only allows for a single reading which is not determined by the relative position of the adverb in the clause (Levin & Rappaport Hovav 2001, cf. Williams 2015, Tomioka 2006).

(120) a. *Peter slowly pushed the door open.*
b. *Peter pushed the door open slowly.*

Therefore, it is also not possible to further modify the resultative predicate with a contradicting adverb in an elaborative clause (Williams 2015, Levin & Rappaport Hovav 2001, see Goldschmidt 2018, Ernst 2002, Eckardt 1998 for contradictory adverbs as a diagnostic for event structure).[25]

(121) a. *Peter quickly pushed the door open,*
 # but the door opened just slowly because something blocked its movement

b. *Tracy ran quickly to the library,*
 # but it took her a long time to get there since she took a circuitous route.
(Levin & Rappaport Hovav 2001: 776)

This contrasts with periphrastic causatives where both the action and the change subevent are accessible for modification by manner adverbs. Crucially, the respective interpretation is sensitive to the position of the adverb. In clause final position, it takes the change-subevent in its scope (here: the opening of the door) whereas in preverbal position, it scopes over the action subevent (here: *Peter's pushing*; Tomioka 2006).

(122) a. *Peter's pushing of the door caused the door to open slowly.*
b. *Peter's pushing of the door slowly caused the door to open.* (Tomioka 2006: 40)

[25] Williams (2015, 2009) observes that the independent modification of the causing and change subevent with contradictory adverbs like (*quickly*/*rapidly* and *slowly*) becomes available if the causing event is further specified by a bare present participial adjunct as in (i).
(i) *Striking the metal rapidly for a long time, Al slowly pounded the metal flat.* (Williams 2009: 694)
Here, the adjoined predicate indicates that the pounding action that caused the metal to become flat was performed by rapid strikes, which does not contradict the assertion that the *pounding flat* event was performed *slowly*. Therefore, Williams (2015, 2009) concludes that manner adverbials in the context of resultative secondary predication scope solely over the change, but not the causing subevent, in direct opposition to lexical causatives. However, the exact mapping of adverbs to (subparts of) events has been notoriously difficult (cf. Koev 2017, Rawlins 2013, Tenny 2000, Travis 1988 and others). In (i), the adjoined predicate is modified by a time-adverbial (*for a long time*) which indicates that the agent performed rapid individual strikes over a longer time span (cf. Krifka 1989). Consequently, *rapid* can only refer to the individual parts of the plural *striking* event. In the matrix clause, the predicate *pound* is also a plural event description that consists of several parts, which are identified as being performed in a quick manner by the adjoined predicate. In contrast, the adverb *slowly* in the matrix clause refers to the whole complex event, this being the rate between the initial pounding and the reach of its telos, i.e. the flat metal (cf. Goldschmidt 2018, Levin & Rappaport Hovav 2001). Therefore, both adverbs scope over different subevents (Eckardt 1998). Still, as the manner adverb *slowly* is not ambiguous, this shows that on the relevant level of the matrix clause the adverb can only access a single event. This observation raises more questions about the mapping of different types of adverbial modifiers on subparts of otherwise inaccessible events. These are, however, beyond the scope of this thesis. Note that even proponents of a bi-eventive analysis assume that the individual subparts are present at the conceptual level (cf. Martin 2020, Vecchiato 2011, Truswell 2007b, Tomioka 2006, Pietroski 2000).

Therefore, resultative secondary predication patterns with lexical causatives, in that only a single event is accessible for adverbial modification with manner adverbs like *quickly* and *slowly*. This observation suggests that both constructions share their event structure.

This assumption is supported by adverbial modification with repetitive modifiers like *again*, which license both a repetitive and restitutive reading in the context of resultative secondary predication (Beck & Snyder 2001b). Under the repetitive reading in (123)a, *again* can be interpreted as having scope over the whole resultative construction. Here, *again* presupposes a previous hammering event that led to a flat result state of the metal. Under the restitutive reading, *again* scopes solely over the secondary predicate, presupposing that the metal was in a flat state before.

(123) *Mary hammered the metal flat again.*
  a. Repetitive: *and Mary hammered the metal flat before.*
  b. Restitutive: *and the metal was flat before.*

Therefore, lexical causatives and resultative secondary predication behave alike, with respect to adverbial modification by manner and repetitive adverbs.

With regard to the categorial type of secondary predicate, non-serializing languages like English, only stative adjectival (or prepositional phrases) function as the result-denoting predicate. In contrast, result verbs like *break* or target state adjectives like *broken* are ungrammatical (Kratzer 2005, Embick 2004, Simpson 1983, Green 1972).

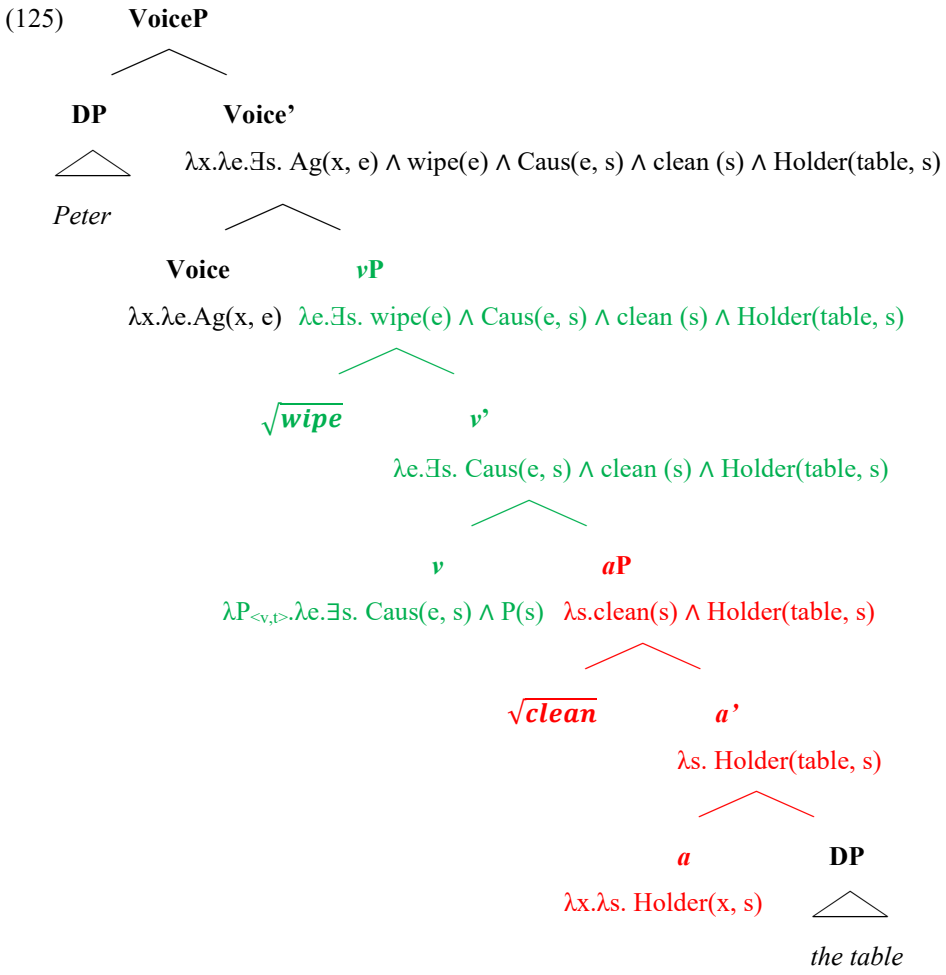
(124) a. * *Mary pounded the apple flatten(ed).* (Embick 2004: 359)
  b. * *Mary smashed the glass break/broke.*
  c. * *Mary smashed the glass broken.*

This restricts resultative secondary predicates in English to non-verbal, stative XPs that do not introduce a change on their own. In this property, non-serializing languages differ significantly from many serializing languages which allow both stative and anticausative secondary predicates (cf. Lin 2004 for a more detailed discussion, Stewart 2001, Collins 1997, Larson 1991; see section 3.3.3).

Based on the similar properties of lexical causatives and resultative secondary predication, I adopt a unified analysis of both constructions in which the secondary predicate is merged in the complement position of an event introducing verbalizer v – such as ResP in the context of lexical causatives (Folli & Harley 2019, Embick 2004, 2009, see also Kratzer 2005 for a similar analysis). Therefore, the difference between lexical causatives

and resultatives is the categorical status of the result-denoting XP. While in lexical causatives, the result component is incorporated into the verbal head (as it require a categorization), the result component is realized outside the verb by an *a*P. As the secondary predicate is already categorized, the verbal head can be modified by a manner root, forming the matrix predicate of the clause (Folli & Harley 2019, Alexiadou & Lohndal 2011). Note that as in lexical causatives, the causative semantics are read off the structural configuration.

(125)



3.1.2 The status of the internal argument and the directness of causation

With respect to the internal argument, resultatives have been distinguished between selected NP and non-selected NP resultatives (also: subcategorized vs. non-subcategorized or control vs. ECM resultatives). In selected NP resultatives, the internal argument of the resultative construction needs to correspond to the internal argument of the verbal predicate (Levin 2020, Kratzer 2005, Wechsler 2005, Levin & Rappaport Hovav 2001, Washio

1997, Simpson 1983 *inter alia*). Compare the examples in (126) where the internal argument of the transitive manner verb necessarily corresponds to the holder of the result state denoted by the secondary predicate.

(126) a. *Peter hammered the metal flat.*
b. *Mary kicked the door open.*
c. *Peter wiped the table clean.*

Therefore, the sentence in (126)b is infelicitous in a context where Mary kicked against a ball, the ball flew against the door and the door opened because of the ball (Levin 2020, Kratzer 2005, Shibatani 1976). However, in non-selecting resultatives, the internal argument can only correspond to the holder of the result state and not as the patient of the matrix predicate, as illustrated by the examples in (127).

(127) a. *Mary drank the teapot dry.* (Levin 2020)
b. *Caz had to spit her mouth clean.* (Levin 2017: 9)
c. *He washed the soap out of his eyes.* (Hoekstra 1988: 116)

In example (127)a, it is not the teapot that Mary drinks but the liquid inside the teapot. Likewise, in (127)b, it is not her own mouth that Caz spits, but the things that she wants to get out of her mouth. In fact, the manner verb cannot combine with the internal argument outside of resultative secondary predication.

(128) a. *# Mary drank the teapot.*
b. *# Caz spit her mouth.*

Moreover, event intransitive verbs can occur as the matrix verb in resultative secondary predication (129) (e.g. Biggs 2019, Beavers 2012, Wechsler 2005). Here, the internal argument necessarily belongs to the secondary predicate, as shown in (130).

(129) a. *Mary sang her throat hoarse.*
b. *Peter ran his nikes treatbare.*
c. *So, then, Bush lied us into war.* (Beavers 2012: 917)

(130) a. *# Mary sang her throat.*
b. *# Peter ran his nikes.*
c. *# Bush lied us. / into war.* (Beavers 2012: 910)

Based on the general availability of non-selected NP resultatives, Levin (2020) and Kratzer (2005) assume that the internal argument of resultatives is always introduced

within the secondary predicate (also Mateu 2012a, Harley 2005, Hoekstra 1988).[26] This conclusion follows from the observation that manner verbs can appear in intransitive contexts, deleting their internal argument (see section 2.2.2.1). Therefore, a unified analysis of selected and non-selected NP resultatives follows from the general properties of its parts and does not involve any additional specific assumptions on the argument structure of resultative secondary predication (Levin 2020).[27] However, the question remains why the internal argument of selected resultatives must be interpreted as the patient argument of the verb.

Levin (2020) and Kratzer (2005) argue that this interpretation results from the type of causative relation between the two subevents which necessarily express direct causation. This property is shared with lexical causatives and further separates resultative secondary predication from periphrastic causatives (see section 2.4).[28] This is illustrated by the examples below. While clauses in (131)a/b are only felicitous in contexts where Mary has directly manipulated the door, the clause in (131)c is also felicitous under a reading that involves certain intermediate steps, e.g. Mary having pushed a ladder that falls against the door, causing the door to open.

(131) a. *Mary opened the door.*
b. *Mary pushed the door open.*
c. *Mary made the door open.*

[26] Note that the position of the object is highly debated in the literature. See Levin & Rappaport Hovav (1995) and Carrier & Randall (1992) for the assumption that the object is the argument of the verb in selected NP resultatives, Rothstein (2004) and Goldberg (1995) for the assumption that the object is always the argument of the verb, and Williams (2012) for the assumption that the object is introduced outside of complex predicate.

[27] Kratzer (2005) discusses potential counterexamples to this assumption in which the resultative secondary predicate instead modifies the result state of the main predicate, for example, in the context of particle verbs in German (i)a or change-of-state verbs (i)b (cf. Washio 1997 on the classification of strong, weak and spurious resultatives, also Iwata 2020, Mateu 2012a).

(i) a. *Sie haben die Wand blau bemalt.* GERMAN b. *The river froze solid.*
They have the wall blue painted
'Sie haben die Wand blau bemalt.' (Kratzer 2005: 183)

However, these examples do not necessarily qualify as counterexamples. In (i)a, the secondary predicate is adverb-like while the result-denoting position in the structure is taken by the result-denoting particle. Therefore, the internal argument is located in the result phrase headed by the particle while the secondary predicate functions as an adverbial (Kratzer 2005). In (i)b, the internal argument of *break*-type change-of-state verbs like *freeze* are base-generated in a silent result phrase. Thus, the structural configuration of this class of verbs is the same in and outside resultative constructions (Embick 2009).

[28] However, Neeleman & van de Koot (2012) offer the observation that lexical causatives do not always seem to express direct causation, based on examples like in (i) (also Danlos 2001, Levin & Rappaport Hovav 2001, cf. Martin 2018, Wolff 2003 for further discussion).

(i) a. *NHS supplies chaos killed by brother.*
b. *The gunsmith's negligence killed the sheriff.* (Neeleman & van de Koot 2012: 27f)

Although the distinction between direct and indirect causation is commonly made in the study of causative event relation, it has been notoriously difficult to formulate a definition that accounts for the range of properties that have been attributed to this distinction; e.g. control (Wunderlich 1997), intentionality (Neeleman & van de Koot 2012) or direct manipulation (Shibatani 1976). In this thesis, I adopt a definition of direct causation that refers to the tightness of the two events expressed by lexical causative and resultative predicates (Levin 2020, Truswell 2007b, Kratzer 2005, Tomioka 2006, Levin & Rappaport Hovav 1991, Bittner 1999 *inter alia*). According to Wolff (2003), direct causation can be understood as the absence of intervening or intermediate causers between two events in a causal chain.

(132) **No intervening cause criterion:**

Direct causation is present between a causer and the final cause in a causal chain (1) if there are no intermediate entities at the same level of granularity as either the initial causer or the final causer, or (2) if any intermediate entities that are present can be construed as an enabling condition rather than an intervening causer. (Wolff 2003: 5)

Therefore, only event participants that can be construed as enabling conditions, e.g. instruments, can be involved in direct causation (cf. Bohnemeyer & van Valin 2017 on the macro-event property). A similar view is taken by Kratzer (2005) who interprets direct causation as the absence of intervening or intermediate events (cf. Ginet 1990). Consequently, only events that are directly dependent on each can be understood as a form of direct causation.

(133) a. **Events of causing other events (direct causation):**

An event c is an event of causing an event e iff c is the sum of all the members of some causal chain with a maximal element e.

b. **Events that cause other events (indirect causation):**

An event c is an event that causes an event e iff c is the minimal element of some causal chain with maximal element e. (Kratzer 2005: 197)

As Levin (2020) points out that the slight variation between each definition reflects different concepts of causal chains. On the one hand, Wolff's (2003) definition interprets causation to take place on the individual level, building on the transmission of force between entities in a causal chain (building on Croft 1991). Therefore, only individuals that do not have their own force, i.e. instruments, can be involved in direct causation, as they qualify as an enabling condition. On the other hand, Kratzer's (2005) definition assumes

that causation takes place between events (Lewis 1973). Despite these conceptual variations, Levin (2020) suggests that the underlying intuition of both definitions can be summarized by a more abstract "tightness condition" (cf. Tomioka 2006). Below, I illustrate how this condition constrains the interpretation of the internal argument in selected NP (134)a and non-selected NP resultatives (134)b (based on Levin 2020).

(134) a. *Mary kicked the door open.*
b. *Peter drank the teapot dry.*

In selected NP resultatives (134)a, the only available interpretation is that the internal argument is shared by the matrix verb and the resultative secondary predicate. Therefore, the clause is felicitous under a reading where Mary has kicked the door directly, but not under a reading where Mary has kicked a ball and that ball has opened the door. Under Wolff's (2003) account, the ball qualifies as an intermediate causer and not as an instrument, as it comes with its own force. Therefore, the ball does not qualify as an enabling condition and violates the tightness condition on resultative secondary predication. Under Kratzer's (2005) account, the semantic relation between the manner event and the causing event is direct as no intervening event is available in the interpretation. Given the semantic denotation in (135), the property of event that is true of any 'kicking' action that is also a completed event of causing the door to be open. Therefore, Kratzer (2005) concludes that because the manner event and causing event are identical, it is inferred that the participant is part of both the manner and the causing event (see also Rothstein 2004, Levin & Rappaport Hovav 2001, Wechsler 1997 for a related analysis of resultatives based on event culmination).

(135) $[\![\text{kick the door open}]\!] = \lambda e.\exists s.\ \text{kick}(e) \wedge \text{Caus}(e, s) \wedge \text{open}(s) \wedge \text{Holder}(\text{door}, s)$

This contrasts with non-selected NP resultatives as in (134)b. Here, the implicit argument of the verb is different to the holder of the result state, i.e. it is not the teapot that Peter drinks but the liquid that is inside the teapot. As noted by Kratzer (2005), this observation is crucial as the sentence cannot describe a situation where Peter's drinking of all the in well causes the teapot to be dry because there is no water left to make tea from. She argues that this inference follows naturally from the semantics of the construction.

(136) $[\![\text{drink the teapot empty}]\!] = \lambda e.\exists s.\ \text{drink}(e) \wedge \text{Caus}(e, s) \wedge \text{empty}(s) \wedge \text{Holder}(\text{teapot}, s)$

Here, the drinking event is likewise a completed event of causing the teapot to become dry, implying that the drinking event must have a direct impact on the content of the teapot. In contrast, the alternative interpretation would leave a gap in the causal chain of events, violating the tightness condition on resultative secondary predication (cf. Levin 2020). Moreover, the liquid does not count as an intermediate causer but as an enabling condition, as it does not contribute its own force to the matrix event (Wolff 2003).

In summary, the internal argument in resultative secondary predication is uniformly introduced by the secondary predicate and related to the causing event under the direct causation constraint on resultative secondary predicates. In section 3.4, I briefly return to the issue of direct and indirect causation in the context of verb serialization.

3.1.3 Intransitive resultative secondary predication

In addition to transitive resultative secondary predication, there are also intransitive resultatives that occur without an external argument, as shown in (137) (cf. Iwata 2020, Goldberg & Jackendoff 2004, Levin & Rappaport Hovav 2001).

(137) a. *The eggs broke open.*
b. *The lake froze solid.*
c. *The gate swung shut.*

Crucially, this type of resultative secondary predication is restricted to result verbs that do not specify the type of external argument, and also participate in the causative alternation outside of resultatives (cf. section 2.2.2.1 and 2.3.2). This contrasts with resultatives in which the matrix verb is a manner verb that requires the presence of an external argument (although a middle interpretation may be possible; Embick 2004).

(138) a. * *The door pushed open.*
b. * *The table wiped clean.*
c. * *The metal hammered flat.*

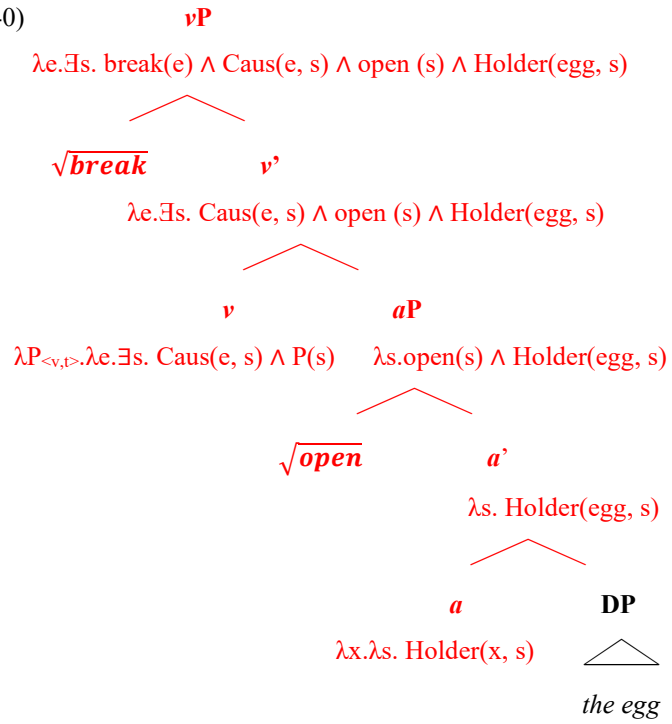
This shows that the ability to form intransitive resultative predicates depends on the properties of the matrix verb. Cross-linguistic support for this assumption comes from languages in which manner verbs are able to form anti-agentive verbs (see section 2.2.2.1). In Chinese, for example, manner verbs like *xǐ* ‘wash’ can form anti-agentive verbs that lack an external argument (139)a (Martin et al. 2020). Crucially, this property also holds true when the verb appears as the matrix predicate in a resultative construction (139)b (Liu 2019, Williams 2014, Huang 2006, Lin 2004).

(139) a. *Yīfú xǐ le.*
coat wash PFV
'The coat washed.'

b. *Shàngyī xǐ-gānjìng le.*
coat wash-clean PFV
'The coat is washed-clean.' (Martin et al. 2020: 55)

Consequently, the availability of intransitive resultatives reflects the general availability of external argument deletion of the matrix predicate. This variation can be explained by making the assumption that transitive and intransitive resultatives only differ in the presence of a Voice layer which introduces the external argument, as shown in (140).

(140)



3.1.4 Summary

In this section, I have proposed a unified analysis of lexical causatives and resultative secondary predication, in which the two types of causative predication differ primarily in the syntactic category of the result-denoting constituent, namely *a*P/PP vs. ResP. The pre-categorized nature of the resultative secondary predicate enables the eventive verbalizer to be modified with an additional manner root. Therefore, both the manner and result component of a causative relation can be realized by respective roots. With respect to argument structure, I have adopted an analysis in which the internal argument is obligatorily introduced by the secondary predicate. In contrast, the relation to the causing event

is inferred by the constraint that resultatives, like lexical causatives, are subject to a tightness condition on the causative relation of the subevents. More generally, the argument structure of the resultative secondary predication has been shown to be determined by the idiosyncratic properties of the matrix predicate. Consequently, two types of cross-linguistic variation are expected in the context of resultative secondary predication, with respect to the argument structure of the matrix predicate and the categorial type (cf. Williams 2014, Williams 2009) and the syntactic size of the secondary predicate (e.g. *a*P, PP, *v*P; Larson 1991).

3.2 The *means* construction

A different strategy for conveying resultative semantics is the *means* construction (also known as *by*-locution, manner *by*-phrase or causative *by*-phrase; Sæbø 2016, Williams 2015, Solstad 2009, Pylkkänen 2008, Truswell 2007a, Bennet 1994, Dowty 1979, Davidson 1963, Anscombe 1957 *inter alia*). In this construction, causative verbs function as the matrix predicate, while a manner of the causing event is modified by an adjoined predicate, e.g. by a prepositional *by*-phrase or a bare present participial adjunct in English (Truswell 2007b).

(141) a. *Mary **flattened** the metal by **hammering** it.*
b. *Peter **cleaned** the table by **wiping** it.*
c. *John **opened** the door by **pushing** it.*

In an event template notation, the means construction can be formalized as shown in (142) where the underspecified causing event of the causative matrix predicate is specified by the adjoined *by*-phrase (Iwata 2020, Talmy 2000, Goldberg 2001, Levin 1993).

(142) [[X ACT] CAUSE [Y <FLAT>] [BY ACT$_{\text{<HAMMER>}}$]]

In this section, I investigate the semantic contribution of the manner adjunct and its relation to the event-structure of the matrix verb, with a focus on causative *by*-phrases (Bellingham 2019, Solstad 2009, Sæbø 2008, Bennet 1994, Dowty 1979, Anscombe 1957). Here, I adopt the analysis that the *by*-phrase asymmetrically modifies the underspecified causing event of the causative predicate (Sæbø 2016, 2008, Solstad 2009, 2006, Truswell 2007a, b). As the means construction shares many morphosyntactic and semantic properties with resultative secondary predication, I propose that the manner adjunct merges as a pre-categorized event modifier within the causative *v*P (Sæbø 2016, Solstad

2009). Therefore, the manner adjunct occupies the same structural position as manner roots in resultative secondary predication. Consequently, both types of resultative constructions can be interpreted as two ways to accommodate resultative semantics under the constraint of the verbal categorizer only being able to a categorize a single root at a time.

3.2.1 Manner/means modification of the causing event

The means construction subsumes a range of related constructions in which an adjoined XP specifies the manner/means component of a causative event description. In Germanic languages, this function is typically realized by prepositional phrases such as *by*-phrases in English or *durch*-phrases in German (Sæbø 2008, Solstad 2006). In addition, gerundive adjuncts in English and Romance languages may be used in the same fashion (Mateu 2012a, Truswell 2007a). In the following sections, I focus primarily on the English *by*-phrase. It is important to distinguish the means construction from other uses of *by*-phrases, e.g. in passives where the *by*-phrase realizes the implicit external argument (e.g. Solstad 2006 on the various functions of the German *durch*, Clark & Carpenter 1989 on English *from*, Alexiadou & Anagnostopoulou 2009 on Greek *apo* and *me*).

(143) a. *The door was opened by Peter.* PASSIVE
b. *Peter opened the door by pushing it.* MEANS

In general, the *means* construction is observed primarily in two environments: (i) causative predicates and (ii) criterion predicates such as *betray*, *keep a promise* etc. (Bücking 2014, Sæbø 2008, Kearns 2003). Significantly, both types of predicates are underspecified, with respect to the manner/means in which a certain 'result' is achieved. In the following, I put criterion predicates aside and focus solely on causative predicates.

As argued by Sæbø (2016, 2008), Solstad (2009) and Bennet (1994), the preposition *by* is semantically vacuous and does not contribute any semantics to the composition of the two events denoted by the matrix and adjoined predicate (cf. Davidson 1963, Anscombe 1957, but see Bücking 2014, Schnieder 2008, Fabricius-Hansen 2006, Dowty 1979, Wreen 1987, Thomson 1977 for alternative analyses where *by* introduces a causative or identifying function). Therefore, the means adjunct simply adds an event description *e'* that identifies the underspecified causing event variable *e* introduced by the causative predicate (Sæbø 2016, 2008, Solstad 2009, Truswell 2007a, b, see also Bellingham 2019). In this, the *by*-phrase further elaborates the manner/means of the causing event that caused the change-of-state of the internal argument. This is illustrated by

the examples below. Before the introduction of an external argument, the causative predicate *clean* merely denotes a set of events *e* that causes the table to be clean (144); i.e. at this stage the causing event *e* is completely underspecified.

(144) a. *Mary cleaned the table.*
b. ⟦clean the table ⟧ = λe.∃s. Caus (e, s) ∧ clean (s) ∧ Holder(table, s)

In the means construction, the event introduced in the adjunct (here: the *wiping*) identifies the underspecified event variable of the causing event via Event Identification, and thus, predicates over the causing event. Note that the composition must involve Event Identification, as the *by*-phrase introduces its own agent role, ruling out a composition via Functional Application or Predicate Modification because of type mismatches (Kratzer 1996).

(145) a. *Mary cleaned the table by wiping it.*
b. ⟦clean the table ⟧(by wiping it)
= λxλe.∃s. Ag(x, e) ∧ wipe(e) ∧ Pat($table_1$, e) ∧ Caus(e, s) ∧ clean (s) ∧ Holder($table_1$, s)

Therefore, the two predicates are in an asymmetric relation which satisfies the observation that the two predicates are not interchangeable even though they predicate over the same event (Sæbø 2008, Goldman 1970, contra Anscombe 1957). More precisely, it is not possible for the manner predicate to function as the matrix predicate with the causative predicate adjoined to it (146). Instead, the two predicates are in a part-whole relation in which the adjoined predicate identifying the underspecified event in the structure of the causative predicate.

(146) #*Mary wiped the table by cleaning it.*

This analysis has further implications for the event structure of the means construction, as the event description in the *by*-phrase should be subject to the same constraints as lexical causatives or resultative secondary predication. Thus, it is expected that the means construction obligatorily expresses direct causation. Truswell (2007a,b) suggests that this prediction is borne out by the data (also Solstad 2006 on German *durch*). Referring to Fodor's (1970) classical example, he demonstrates that a *by*-phrase only allows for intermediate events/causers when it is attached to periphrastic causatives (147)a, but not when it is attached to lexical causatives (147)b.

(147) a. *John caused Bill to die on Sunday by stabbing him on Saturday.*
b. # *John killed Bill on Sunday by stabbing on Saturday.* (Fodor 1970: 423)

Truswell (2007a,b) argues that this restriction is only expected if the *by*-phrase predicates over the same event as the matrix causative predicate, and does not introduce a causing relation between the *by*-phrase event and the causing event entailed by the lexical causative predicate.

Further support for this claim comes from the observation that a *by*-phrase can ambiguously modify periphrastic causatives, but not lexical causatives (Fodor 1970). In the context of a periphrastic causative as in (148)a, the *by*-phrase can either be interpreted as John or Bill doing the swallowing of Bill's tongue, i.e. the *by*-phrase either accesses the causing event or the caused event. In contrast, in the context of a lexical causative as in (148)a, the *by*-phrase is not ambiguous, in that it is clear that John does the swallowing.

(148) a. *John caused Bill to die by swallowing his tongue.*
b. *John killed Bill by swallowing his tongue.* (Fodor 1970: 423)

While this supports the bi-eventive analysis of lexical causatives, it also shows that the by-phrase predicates over the same event as the causative predicate, as it does not add an additional causing event into the structure. If this were the case, a periphrastic/indirect reading would be expected (see also Biggs & Embick 2020).[29]

Moreover, Truswell (2007a,b) observes that *wh*-extraction of the internal argument out of a *means* adjunct is possible, contrary to the fact that *wh*-extraction out of adjuncts is otherwise strongly dispreferred. This observation holds true for both by-phrases and bare present participial adjuncts (149).

[29] With respect to manner adverbs such as *quickly* and *slowly*, the means construction allows a modification of the causing event within the adjunct. Yet, as the event modified within the adjunct is identified with the causing event of the matrix clause, the position of the adverb does not seem to influence the semantics of the construction. In both positions, the adverbs scopes over the same event, i.e. the causing event.
(i) a. *Mary cleaned the table by wiping it quickly.*
b. *Mary quickly cleaned the table by wiping it.*
Consequently, modification by contradictory adverbs is infelicitous as it is perceived as a contraction. This restriction follows from the assumption that both predicates jointly predicate over the same event.
(ii) ?? *Buffing them rapidly, Peter slowly shined his shoes.*
In contrast, contradictory adverbs become felicitous in the context of periphrastic causatives, under a reading in which the adverb in the matrix clause modifies the change sub-event (cf. Martin & Schäfer 2014).
(iii) *Buffing them rapidly, Peter slowly made his shoes shine.*
This becomes clearer in the context of agent-oriented adverbs like *carefully* and *wildly.* Combining two contradictory adverbs in the matrix and the adjoined clause is clearly infelicitous and indicates that both verbs predicate over the same event (Zimmermann & Amaechi 2020).
(iv) # *The lumberjack carefully felled the tree (by) chopping it wildly.* (Zimmermann & Amaechi 2020)
Therefore, the distribution of contradictory manner adverbs supports the assumption that the *means* adjunct identifies the causing event of the lexical causative predicate. However, since its syntactic structure is more elaborated than in resultative secondary predication, it allows for individual adverbial modification (see also FN25 for a more detailed discussion of the interpretation of *quickly* and *slowly*).

(149) a. *What did John cut himself [carving t]?* (Truswell 2007b: 147)
b. *What did John make himself angry [trying to fix t]?* (Truswell 2007a: 1371)
c. % *Which button did John open the door [by pressing t]?* (Truswell 2007b: 129)

Like Fodor (1970), Truswell (2007a,b) notices that the *by*-phrase in the context of periphrastic causatives can be ambiguous in licensing both direct, indirect causation or depictive readings (cf. Eckardt 1998 on the depictive interpretation in the context of lexical causatives). Therefore, a sentence like that in (150) can be interpreted in two ways.

(150) *John make himself angry trying to fix the radiator.*

Under a direct causation reading, the *by*-phrase identifies the causing event that stands in a direct relation with the caused result state; John was trying to fix the radiator and this activity caused him to become angry. In contrast, under an indirect causation or a depictive reading, the *by*-phrase denotes an event at the beginning of a causal chain which leads to the result state denoted by the matrix predicate, e.g. John was trying to fix the radiator, trying to fix the radiator caused him to miss his favorite TV program, and missing his favorite TV-program made him angry.[30] Here, it is not the attempt to fix the radiator that causes John to be angry but an intermediate event, i.e. the missing of his favorite TV program. As a result, the relation between the causing and caused event is indirect (if it exists at all). Crucially, in indirect or depictive contexts, *wh*-extraction is not felicitous.

(151) A: *What did John make himself angry [trying to fix t]?*
B: *The radiator. It just really got to him.*
B': # *The radiator. But it wasn't because he was trying to fix the radiator that he made himself angry, it was that he happened to be trying to fix it while his favorite program was on.*
(Truswell 2007a: 1371)

Therefore, Truswell (2007a,b) concludes that *wh*-extraction out of means adjuncts is only possible if the adjoined predicate identifies the underspecified event predicate entailed by the causative predicate. Consequently, the direct causative relation between the adjoined predicate and the result state denoted by the matrix predicate constrains the internal argument of the means predicates to instrument or enabling conditions, as intermediate causer

[30] Truswell (2007a,b) suggests that this interpretation is in fact a depictive interpretation close to the meaning that John made himself angry *while* fixing the radiator. Under this analysis, the *by*-phrase and the matrix event are not part of a causal chain but instantiate a cumulative event expression. Similar observations are made by Solstad (2006) on German *durch*-phrases, which can license a precondition that causes the matrix predicate to happen without necessarily causing it directly. While it is obvious that the *by*-phrase/participial adjuncts can have several interpretations, the important observation here is that *wh*-extraction is only available under a direct causation reading.

would violate the tightness condition (Truswell 2007a,b building on Wolff 2003).[31] As shown in (152), this prediction holds true, as in the context of event participants that qualify as intermediate causers the means construction becomes infelicitous.

(152) a. *John opened the door by pressing **the button**.* (Truswell 2007b: 129)
b. *John cut (...) himself carving **the turkey**.* (Truswell 2007b: 210)
c. *# John opened the door by kicking **the ball**.*
d. *# He opened the door by tickling **Sally** who was pressed against it.* (Apresjan 2000: 22)

Therefore, the means construction resembles resultative secondary predication and lexical causatives, with respect to their bi-eventive event structure and to the direct interpretation of the causative relation between the subevents. However, the ability to introduce its own internal argument shows that the means adjunct exhibits greater morphosyntactic and semantic flexibility than a root in resultative secondary predication.

This structural difference is also visible in the context of adverbial modification with repetitive modifiers, such as *again* (see also FN29 on the individual modification of the means predicate by manner adverbials). As shown in section 3.1.1, a repetitive reading of *again* in resultative secondary predication necessarily scopes wide, presupposing both the causing event and result state. Therefore, the sentence in (153) cannot be interpreted to mean that Peter hammered the metal for a second time, but only this time did his hammering have an impact on the metal, which therefore metal becomes flat.

(153) *(Again) Peter hammered the metal flat (again)* NARROW REPETITIVE
 # and Peter hammered the metal before but nothing happened.

In contrast, the means construction allows for such narrow repetitive reading if *again* is located within the *by*-phrase (154). Here, the flattening of the metal is not part of the presupposition of *again*, as the sentence is felicitous in the context in which Peter's initial hammering does not have an impact on the metal.

[31] Note that the sentence in (152)c becomes more acceptable if the object of the matrix clause is co-referred by a prepositional phrase, indicating that the ball was kicked against the door causing it to open. The intuition is that the clause in (i) describes a situation where Peter deliberately kicked the ball against the door to open it.
(i) *Peter opened the door by kicking a ball against it.*
As outlined in section 3.1.2, Wolff (2003) argues that the ball is interpreted as an intermediate causer and not as an instrument, which makes its conceptual presence unavailable in the context of resultative secondary predication and lexical causatives. While the structure in (i) questions the assumption that the *means* construction necessarily denotes direct causation, the presence of the directional PP, which establishes a direct relation between Peter's kicking of the ball and Peter's opening of the door, may allow for a coercion in terms of the ball being interpreted as an instrument rather than an (intermediate) causer.

(154) *Peter flattened the metal by hammering it again.* NARROW REPETITIVE
and Peter hammered the metal before, but nothing happened.

This narrow repetitive reading of *again* follows from an event structure in which the adverbial attaches to the hammering event before it identifies the underspecified causing event of the lexical causative predicate. This indicates that the means construction and resultative secondary predication differ in the morphosyntactic size of the manner denoting constituent, namely √ vs. XP.

3.2.2 *v*P-internal event modification

Based on the semantic properties of the means construction, I propose that the manner/means-denoting adjunct is merged as an event modifier to the causative *v*P in the structure of the matrix verb (Sæbø 2016, 2008, Solstad 2009, 2006). As such, the means adjunct occupies the designated position for (causative) event modification that hosts event modifiers of different kinds, e.g. manner roots like $\sqrt{wipe}$ or eventive PP-causers such as *from the wind* (Folli & Harley 2019, Alexiadou & Lohndal 2011, Alexiadou et al. 2015). However, in contrast to roots or natural causer PPs such as *from the wind* that purely modify the causing event, the *means* adjunct also introduces additional event participants to the causative predicate.

For example, in the context of the English *by*-phrase, the means adjunct embeds a participial or verbal gerund. As proposed by Alexiadou (2013), both constructions embed verbal projections up to VoiceP, introducing an agentive external argument role (cf. Alexiadou et al. 2011, Alexiadou et al. 2010). This can be shown by the availability of agent-oriented adverbs like *deliberately*, that are sensitive to the presence of agentive external argument within the PP-adjunct (cf. Solstad 2006 on German *durch*-phrases).

(155) a. *Mary cleaned the table by **deliberately** wiping it.*
b. *Peter broke the window by **deliberately** smashing it.*

The silent external argument of the adjoined predicate is realized by PRO which must be controlled by a DP argument of the matrix predicate. As illustrated by the examples below, in most contexts the antecedent is the external argument of the matrix clause.[32]

[32] Note that the *by*-phrase also appears to be felicitous in the context of anticausative predicates where the patient argument qualifies as a potential agent of the adjunct predicate (Bellingham 2019). Generally, these examples are subject to speaker variation which may also differ between sentences. While some speakers

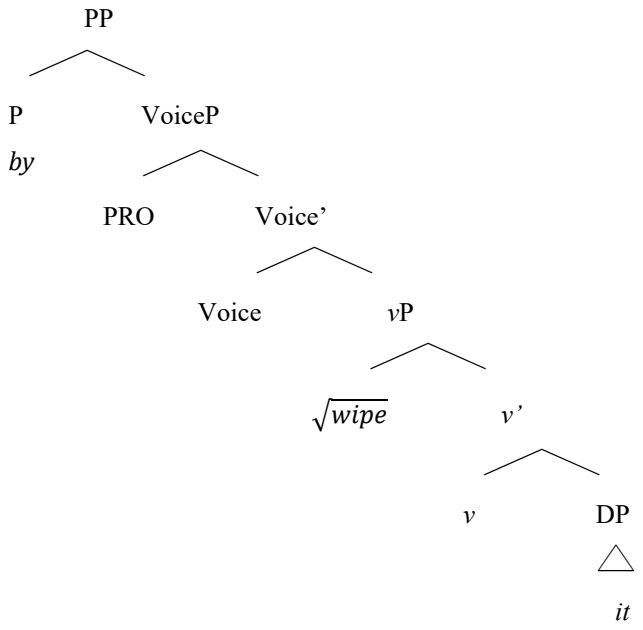
(156) a. ***The policemen**$_i$ killed the thief by **PRO**$_i$ shooting him in the back.*

b. ***Peter**$_i$ opened the door by **PRO**$_i$ pushing it.*

c. ***Mary** cleaned the table by **PRO**$_i$ wiping it.*

Therefore, I assume the following syntactic structure of the *by*-phrase (157), in which the preposition embeds a full agentive VoiceP. Note that this is the structure of an embedded participial. In the context of a verbal gerund, a D-layer would appear in between the VoiceP projection and the preposition.

(157)



As the *by*-phrase denotes an event, I assume that it merges in the syntactic position designated for event modification, namely as a modifier of a *v* in causative constructions

reject *by*-phrases with anticausatives altogether, other speakers are more willing to accept them – though judgements often indicate the only marginal acceptability (see Sillitoe 2016 for similar observations).

(i) a. ? *Peter aged quickly by over worrying.*

b. *Leo was a romantic boy who died stupidly by shooting himself.* (Bellingham 2019: 24)

c. *Mr. Buchanan has become a wealthy celebrity by wrapping his right-wing views in spicy rhetoric.* (Bellingham 2019: 22)

A related issue concerns the type of the adjoined predicate that can appear in the *means* construction, especially regarding its lexical aspect. Truswell's (2007b) preliminary survey suggests that achievement and punctual predicates are strongly dispreferred by the speakers.

(ii) a. * *John drove Mary crazy by reaching the summit.*

b. % *John drove Mary crazy by noticing the problem.* (Truswell 2007b: 128)

Nevertheless, it has been observed that accomplishment predicates like *break* or *open* can function as the adjoined predicate in *means* constructions.

(iii) a. *Yahwed saved the Israelites by opening the Sea of Reeds.* (Sæbø 2008: 141)

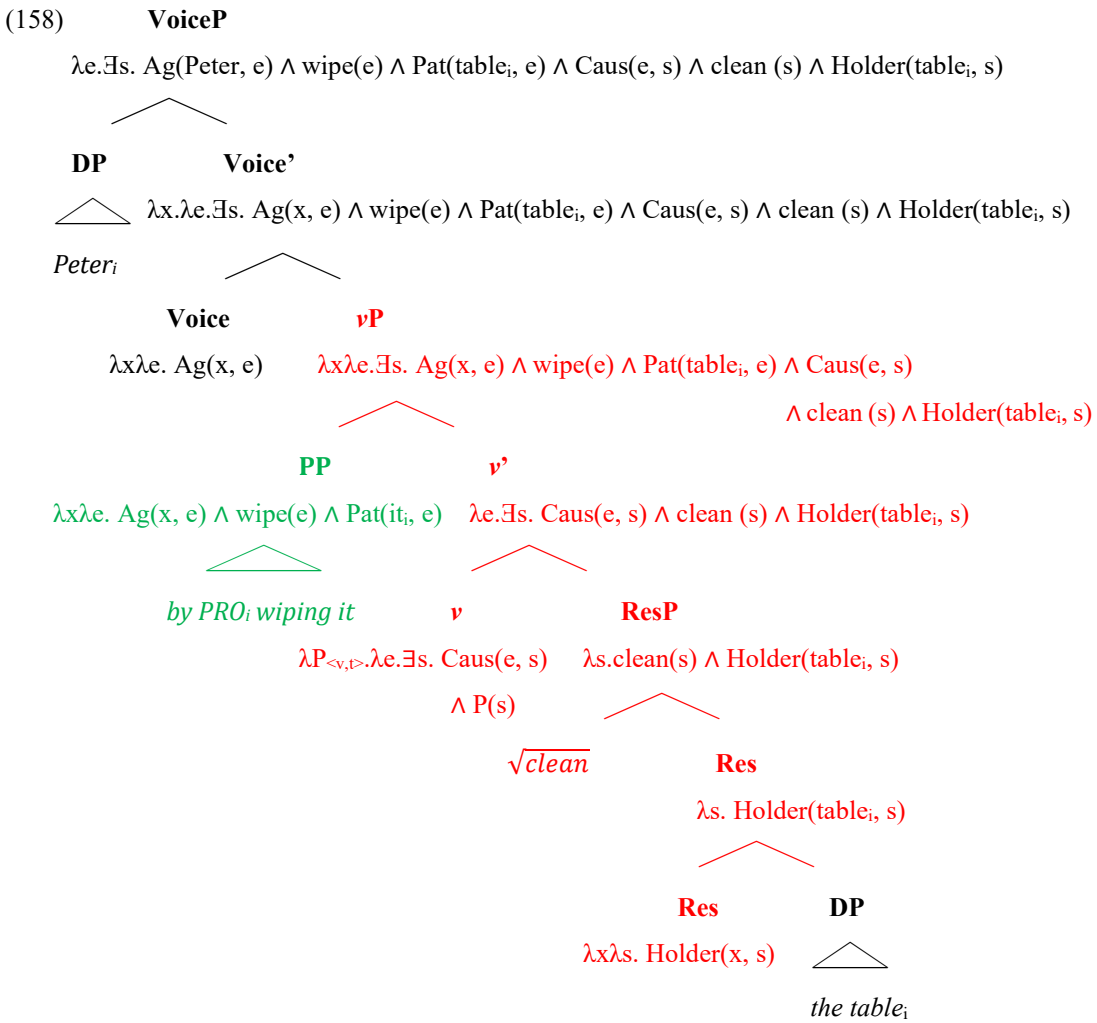
b. *Mary broke the window by opening it.*

At first glance, the examples in (iii) may appear to be counterintuitive under an analysis of event modification, as the adjoined predicate denotes an underspecified causing event by itself. However, as the causative event in the *by*-phrase introduces its own causative relation with an independent result state, it restricts the causing event in the matrix clause to events that satisfy both causing relations simultaneously, i.e. that someone does "something that causes the Sea to become open such that that doing something causing the Sea to become open causes the Israelites to become safe" (Sæbø 2008: 16).

(Solstad 2009). As in the case of causer *from*-PPs, the presence of the *by*-phrase is licensed by the causative configuration of the *v*P. In this position, it identifies the underspecified event entailed by the causative predicate via Event Identification, which accounts for the asymmetric relation between the two predicates (Sæbø 2016, 2008).[33]

The full derivation of the English *means* construction is given in (158). The structure is basically that of the lexical causative verb *clean* with a means *by*-phrase adjoined to its *v*P, modifying the underspecified event variable introduced by the matrix *v*. Note that the adjunct clause comes with its own argument structure which must be checked against the argument structure of the matrix clause. On top of the causative *v*P, a Voice projection introduces the agentive external argument of the whole complex predicate.

(158)



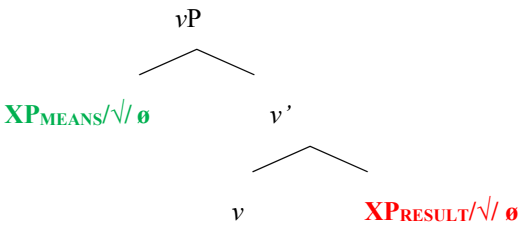
[33] Instead of Event Identification, Sæbø (2008) proposes a compositional "Unification" rule in his DRT analysis which basically results in the same output (also Solstad 2006). Moreover, Solstad (2009) and Sæbø (2018) suggest that the events descriptions are combined with the matrix event via Predicate Modification or Functional Application respectively. While the latter compositional rules are infelicitous in the context of English *by*-phrases, they may be involved in configurations in which the adjoined causing event modifier does not introduce its own external argument (section 6.4 on Samoan and 8.3.3 on Daakaka for examples).

In sum, the means construction differs from lexical causatives in that an event-denoting adjunct modifies the underspecified event variable of the causative predicate. Moreover, it differs from resultative secondary predication in that the result component is realized by an uncategorized ResultP, while manner component is realized by a pre-categorized adjunct. Other than that, both types of resultative construction express the same underlying resultative relation between both events.

3.3 A typology of resultatives

In the previous sections, two morphosyntactic strategies have been identified to express resultative meaning based on the morphosyntactic type of the meaning components. On the one hand, there is *resultative secondary predication* in which the matrix verb denotes the manner of an action while the result component is realized by a stative pre-categorized XP complement, e.g. *a*P or PP. Here, the causative relation between the matrix verb and the secondary predicate is established configurationally. On the other hand, there is *means construction* in which a manner/means adjunct specifies the causing event, which is entailed by a causative verb that specifies the result state by itself. Under the assumption that manner and result components are defined configurationally within the syntactic derivation, the variation between the two types of resultatives boils down to the morphosyntactic size of the relevant constituents: the manner/means or the result component can be realized by a root or categorized XPs such as *a*Ps or PPs.

(159)



Given the configuration in (159), manner verbs and lexical/periphrastic causatives can be defined by the absence of a respective component, i.e. manner verbs lack a result component and causatives lack a manner/means component. Therefore, the predicted structural variation, with respect to the morphosyntactic size of meaning components, is summarized by Table 2.

	Manner/Means (modifier of *v*)	**Result** (complement of *v*)
Manner (e.g. *hammer*)	√	ø
Do + means (e.g. *do hammering*)	XP	ø
Lexical causatives (e.g. *flatten*)	ø	√
Periphrastic causatives (PC) (e.g. *make flat*)	ø	XP
Resultative SP (e.g. *hammer flat*)	√	XP
Means construction (e.g. *flatten by hammering*)	XP	√
Means construction + PC/RSP (e.g. *make flat by hammering*)	XP	XP
*[/?] Root-compounds (verbal compounds?)	√	√
*[/?] Empty verbs (not attested?)	ø	ø

Table 2: Potential combination of manner and result component of different syntactic size.

Cross-linguistically, languages differ significantly in the way they construct resultative meaning. On the basis of their preferred strategy for realizing the result component, Talmy (2000, 1991) classifies languages in two basic classes. On the one hand, there are *satellite-framed* languages that realize the result outside of the verb by a 'satellite', e.g. resultative particles, adjectives or prepositional phrases (i.e. resultative secondary predicate). On the other hand, there are *verb-framed* languages in which the result state is entailed by the verb (i.e. the means construction). While Talmy's (2000, 1991) original insights were based primarily on the motion domain, other authors have shown that this classification also extends to change-of-state domain (Folli & Harley 2019, Mateu 2012a, Beavers et al. 2010, Beck & Snyder 2001b *inter alia*, cf. Goldberg & Jackendoff 2004 on the close relation between resultatives and directionals). In the following, I briefly discuss the basic pattern of cross-linguistic variation and a potential syntactic analysis for this cross-linguistic variation (cf. Folli & Harley 2019, Mateu & Acedo-Matellan 2012). After that I turn to serial verb constructions which have been argued to instantiate a distinct class of equipollent languages, as both manner and result are encoded by verbal predicates

(e.g. Ameka & Essegbey 2013, Slobin 2006, 2004, Zlatev & Yangklang 2004). However, more fine-grained studies suggest that resultative serial verb construction follows the general pattern of Talmy's original classification.

3.3.1 Satellite-framed languages

In satellite-framed languages, resultative meaning is primarily encoded by resultative secondary predication. Typically, the matrix verb describes the manner or means of an (action) event, whereas the result state is realized by a satellite, i.e. the secondary predicate (Acedo-Matellan 2016, Mateu 2012a, Snyder 2001, Talmy 2000 among others). Cross-linguistically, the satellite can appear in morphosyntactic types, e.g. as a particle (160)a, as an adjective (160)b or as a prepositional phrase (160)c.

(160) a. *Peter* ***drückte*** *die* *Tür* ***auf***. GERMAN
Peter.NOM push.PST.3SG ART.FEM.ACC door.FEM.ACC open.PRTCL
'Peter pushed the door open.'

b. *Jānis* ***pie-krāva*** *vagonu* ***pulnu***. LATVIAN
John PRF-loaded.PST.3SG wagon.ACC.SG full.ACC.SG
'John loaded the wagon full.' (Riaubienė 2015: 65)

c. *John* ***cut*** *the meat* ***into small pieces***.

In addition, satellite-framed languages usually allow the result state to be expressed by the verb, with the manner of the causing event expressed by an adjunct, if at all. As discussed in section 3.2, English, a proto-typical satellite-framed language, exhibits the means construction which modifies causative verbs that denote the result state.

(161) a. *Mary* ***flattened*** *the metal* ***by hammering it***.

b. *Unbekannte* ***töteten*** *den Verbrecher* ***durch*** ***einen*** ***Schuss***. GERMAN
Unknown persons killed the criminal through a shot
'Unknown persons killed the criminal with a shot.' (Solstad 2009)

Other examples of languages that have been classified as satellite-framed languages are Germanic languages like Danish, Dutch, Icelandic, Swedish or Yiddish, Slavic languages like Polish, Serbo-Croatian and Ukranian, Finno-Ugric languages like Finnish and Hungarian (though primarily based on the motion domain; Haider 2016, Riaubienė 2015, Slobin 2003, Talmy 2000 among others).

3.3.2 Verb-framed languages

In contrast to satellite-framed languages, verb-framed languages proto-typically express resultative meaning by means constructions, but not by resultative secondary predication (Acedo-Matellan 2016, Mateu 2012a, Snyder 2001, Talmy 2000 among others). Therefore, these languages tend to reject resultative secondary predication, as illustrated by Spanish and Malayalam below.

(162) a. * *María* ***martilleó*** *el metal* ***plano***. SPANISH
Maria hammered the metal flat
Intended: 'Maria hammered the metal flat.' (Mateu 2012a: 258)

c. * *Hari table* ***vritti*** ***tuda-ccu***. MAYALAYAM
Hari table clean wipe-PST
Intended: 'Hari wiped the table clean.' (Son & Svenonius 2008: 391)

Instead, the respective resultative meaning is usually expressed by a causative verb that is modified by a manner adjunct such as a gerund in Spanish, for example.

(163) a. *María* ***aplanó*** *el metal* ***martilleándolo***. SPANISH
Maria flatten the metal hammering
'Maria flattened the metal by hammering it.' (Mateu 2012a: 258)

c. *Hari table* ***tuda-ccə*** ***vritti*** ***aak-i***. MAYALAYAM
Hari table wipe-ADV clean make-PST
'Hari made the table clean by wiping it.' (Son & Svenonius 2008: 391)

Languages that have been described as belonging to the class of verb-framed languages are Romance languages like Spanish, French and Italian, Semitic languages like Hebrew and Arabic, Dravidian languages like Malayalam, Kannada and Hindi/Urdu as well as Turkish (once more based primarily on the motion domain; Haider 2016, Riaubienė 2015, Sudharshana 2011, Slobin 2003, Talmy 2000 among others).

Notably, several authors have indicated that the distinction between satellite- and verb-framed languages seems to correlate systematically with additional phenomena. Therefore, satellite-framed languages generally allow manner-of-direct motion construction (e.g. *The boat float into the cave.*), particle verbs (e.g. *They lock themselves out*), double object construction (e.g. *Peter showed people things*.) and compounds (*hotel room*), while verb-framed languages do not (Folli & Harley 2019, Haider 2016, Harley 2005, Folli & Ramchand 2006, Mateu 2005, Beck & Snyder 2001b among others, cf.

Snyder 2001 on Principle "R"). However, although the basic intuition that languages fall in two classes has been shown to be a quite robust generalization, more detailed studies suggest that the paradigm requires a more fine-grained classification. In this context, it has been observed that certain domains of a language can show properties of one class, while other domains can show properties of another. Moreover, some studies have shown that languages may further differ in whether they lexicalize intermediate event descriptions like *path* and *change* by a verb or a satellite. At least, the latter observation calls for a tripartite organization of the respective domains (cf. Acedo-Matellan 2016, Mateu & Acedo-Matellan 2012, Croft et al. 2010, Beavers & Koontz-Garboden 2012, Gehrke 2008, Son & Svenonius 2008, Slobin 2004). Note that for my purposes here the traditional classification is sufficient.

Within the generative framework, there have been several attempts to explain the underlying syntactic principle that governs the split of satellite- and verb-framed languages by syntactic macro-parameter. On the one hand, some approaches suggests that prepositional elements that encode Path semantics are unavailable in verb-framed languages – which is why such semantics are necessarily encoded in the verb itself (Svenonius 2008, Fábregas 2007, Folli 2002, Higginbotham 2000). On the other hand, verb-framed languages have been described to reject manner roots in causative structures (Mateu & Acedo-Matellan 2012, Harley 2005, McIntyre 2004, Mateu 2002). Most recently, Folli & Harley (2019) have argued that in verb-framed languages, the head of the result-denoting phrase obligatory undergoes head movement into the verb. Consequently, the result state, whether denoted by a root, adjective or preposition, is incorporated into the verb (indicated by a strong *[Res] feature on the *v* head in the derivation below). This contrasts satellite-framed languages in which such head movement is optional if the result component is not realized by a root. Under the assumption that head movement into a categorizing head re-categorizes the moved element, an additional bare manner root cannot directly merge to the same categorizing *v* head.[34]

[34] Note that this analysis seems to be incompatible with a head-movement approach to noun-incorporation in which the nominal head moves into a lexical verb (Baker 1988 et seq., but see Barrie & Mathieu 2016 for an account of noun incorporation that builds on phrasal movement).

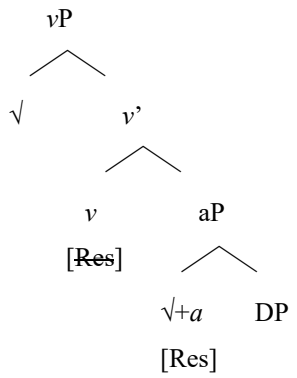
(i) a. *Ñi chao kintu-le-y ta-chi pu waka*
my father seek-PROG-IND the-ADJ COLLcow
'My father is looking for the cows.'

b. *Ñi chao kintu-waka-le-y.* MAPUDUNGUN
my father seek-cow-PROG-IND
'My father is looking for the cows.'

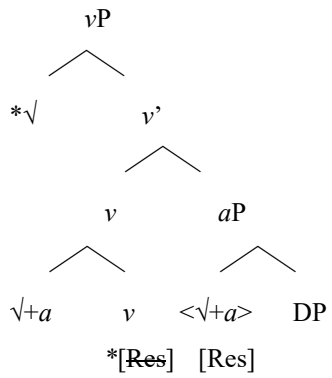
(Baker 2009: 149)

If head movement into a categorizer would block the modification of an additional root, noun incorporation could not be observed with lexical verbs but only with light verbs. As this is not the case, noun incorporation may posit a challenge for a head movement as proposed by Folli & Harley (2019).

(164) a. satellite-framed languages:



b. verb-framed languages



In sum, Talmy's (2000, 1991) typology of verb- and satellite-framed languages refers to the properties of the main verb in resultative constructions. In satellite-framed languages, the matrix verb typically denotes the manner/means of the causing event while the result state is realized by a satellite. In verb-framed languages, the result state is entailed by a causative matrix verb while the manner/means of the causing event is modified by an adjunct. A question that arises here is of how serializing languages with verbal elements that express manner and result components fit into this typology. Do they exhibit properties of satellite- or verb-framed languages or do they instantiate a separate class of languages? In the following section, I review the patterns of resultative RSVCs in different serializing languages and will suggest that serializing languages are subject to the same split such as non-serializing languages.

3.3.3 Resultatives in serializing languages

Languages that make use of verb serialization in order to express resultative meaning differ from non-serializing languages, in that both the manner and result component are realized by verbal elements. Therefore, some authors have suggested extending the cross-linguistic typology to a third class of *equipollent-framed* languages in which both manner and result are equally encoded by the main verb of the SVCs (again, the focus of these studies lies on the motion domain; e.g. Ameka & Essegbey 2013, Slobin 2006, 2004, Zlatev & Yangklang 2004). This line of argumentation often implies that the two verbs in a serial verb construction have equal syntactic status in that they function as the main verb simultaneously. However, several studies on the internal syntactic organization of directional or resultative SVCs reveal that SVCs resemble resultative constructions in non-serializing languages, in that the serialized verbs are in an hierarchical relationship (Liu 2019, Tusun & Hendriks 2019, Sugar 2019, Cole 2016, Ko & Sohn 2015, Lambert-

Brétière 2009, Tomioka 2006, Collins 1997 and many more). By re-interpreting Talmy's (2000) distinction between *satellite-* and *verb-framed* languages to refer to the two kinds of morphosyntactic configuration discussed above, RSVCs appear to resemble non-serializing languages because of the main verb status of either the manner or result denoting verb (see also Talmy 2016). More precisely, if the manner verb functions as the main verb of the construction, the respective RSVCs can be grouped with satellite-framed languages; if the result verb functions as the main verb, the RSVC can be grouped with verb-framed languages. Notably, both types of resultatives have been identified in serializing languages:[35]

On the one hand, there are serializing languages in which the result state is realized by stative or anticausative unaccusative verbs. This is illustrated below for the Niger-Congo language Édò and the Tai language Lao. In every construction, the transitive V1 denotes the manner of the causing action, whereas the result component is realized by a stative or anticausative verb (Cole 2016, Stewart 2001).

(165) a. *Èsósà* ***kòkó*** *àdésúwà* ***mòsé***. ÉDÒ
Esosa raise Adesuwa be.beautiful
'Esosa raised Adesuwa to be beautiful.'

b. *Òzó* ***sùá*** *ágá* ***dé***.
Ozo push chair fall
'Ozo pushed the chair down.' (Stewart 2001: 15)

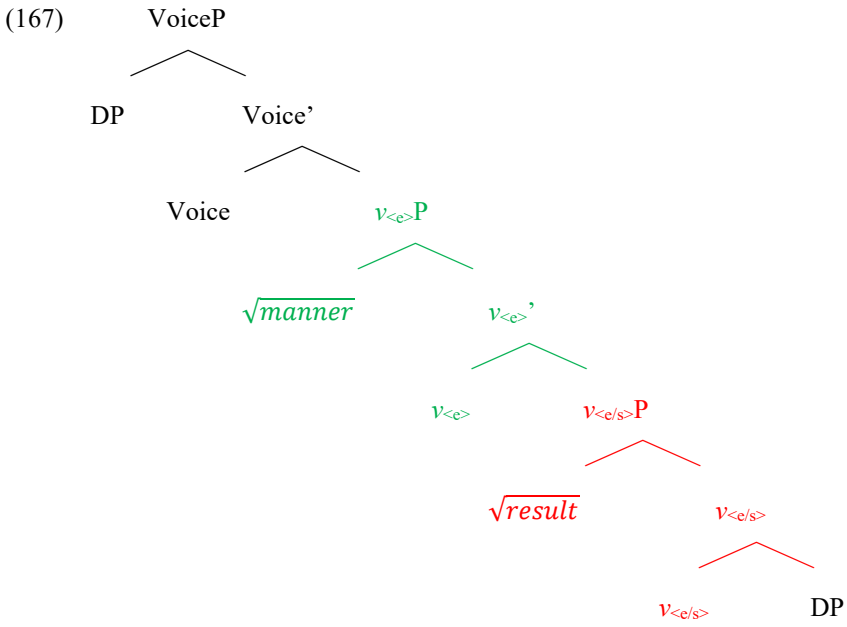
(166) a. *Candii*$_3$ ***liit***$_4$ *sùa*$_5$ ***liap***$_4$. LAO
Jandee iron shirt smooth
'Jandee ironed the shirt smooth.

b. *Nit*$_1$ ***nyuu***$_4$ *de*$_2$*nòòj*$_4$ ***tok***$_2$.
Nit push child fall
'Nit pushed the child down.' (Cole 2016: 51)

[35] In this section, I exclude resultative structures in which it has been argued that the initial verb is a functional verb, such as in co-/light verb construction in many Australian languages (e.g. Baker & Harvey 2010, Schultze-Bernd 2007) – see also Aboh (2009) on RSVCs in Gungbe. These structures differ significantly from the type of RSVCs discussed here, as the manner-denoting element is not derived from a root, but is the spell-out of the causing-event introducing *v* head itself. Usually, these light verbs are semantically bleached and form a restricted set of elements. Still, it could be argued that the light verb operates as the head of the construction, and as such light verb constructions belong to the group of satellite-framed languages (cf. sections 2.4 and 8.4).

Since Larson (1991), RSVCs have often been discussed in relation to resultative secondary predication in non-serializing languages, in that the manner V1 functions as the main verb of the clause that takes the result V2 as a complement (e.g. Cole 2016, Baker & Stewart 2002, Collins 1997). Consequently, the major difference between resultative secondary predication in serializing and non-serializing languages is the syntactic category of the secondary predicate. While non-serializing languages only allow non-verbal secondary predicates, serializing languages (also) allow verbal secondary predicates. By adopting this analysis, these serializing languages can be classified as satellite-framed languages with a morphosyntactic structure, as shown in (167).

(167)



This type of RSVCs has also been described for other West-African (e.g. Yoruba, Ewe, Kwawu, Akan or Ijo) and South-East Asian languages (e.g. White Hmong, Vietnamese or Thai) but has also been observed in Oceanic languages and beyond (cf. chapter 4 on Oceanic; Jarkey 2015, Williams 2008, Carstens 2002, Crowley 2002 inter alia).

Interestingly, the availability of verbal resultative secondary predicates correlates with the availability of stative verbal PC-verbs in many serializing languages.[36] However, in addition to stative secondary predicates, anticausative secondary predicates, such as

[36] To account for this split, there has been an attempt to formulate a serializing parameter that separates serializing from non-serializing languages. In this context, it has been highlighted that many serializing languages do not distinguish between finite and infinite verb forms but mark TMA categories outside of the verb by particles or auxiliaries, if at all. Therefore, it has been proposed that serializing and non-serializing languages differ in the way verbs are licensed for TMA categories, namely the absence of V-to-T movement in serializing languages (Stewart 2001, Collins 1997, also Veenstra & Muysken 2017 for a discussion). However, this generalization is questioned by the fact that verb serialization is also observed in languages that marks morphological tense on the verb (cf. Aikhenvald 2018).

'fall', 'break' or 'die', have been frequently described (see example (165)b and (166)b above). In this case, the secondary predicate introduces the change sub-event by itself – a property that is, notably, absent in non-serializing languages such as English (Embick 2009, 2004).

(168) a. * *Peter hammered the metal flattened.*
b. * *Peter threw the vase broken.*

This relates to a more fine-grained analysis of the Talmyan typology of motion verbs, which also have been decomposed into three layers – *manner*, *path* and *location* (Folli & Harley 2019, Son & Svenonius 2008, Talmy 2000 among others). In the change-of-state domain this would translate to *manner*, *change* and *result.*

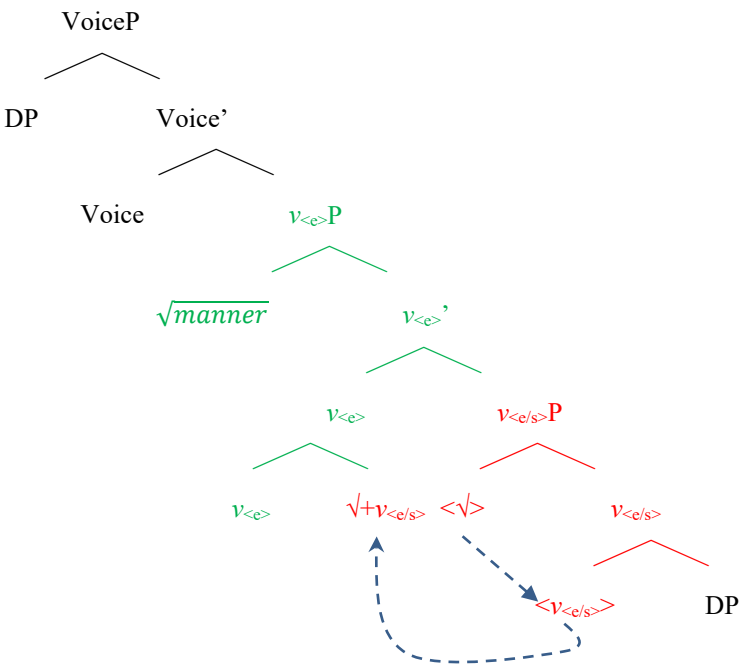
A special example of a satellite-framed serializing languages is Mandarin, in which the manner and result verb form a resultative compound (see Talmy 2000 for the classification of Mandarin as a satellite-framed language). As with other serializing languages discussed above, the V1 in a resultative compound denotes the manner, whereas a stative or anticausative V2 denotes the result (Liu 2019, Hu 2018, Huang 2006, Lin 2004, Li & Thompson 1973 among others).

(169) a. *Li$_3$si$_3$ ca$_1$-gan$_1$-le$_5$ zhou$_1$zi$_5$.* MANDARIN
Lisi wipe-dry-PRF table
'Lisi wiped the table dry.' (Lin 2004: 91)

b. *Zhang$_1$san$_1$ kan$_3$-dao$_3$-le$_5$ shu$_4$.*
Zhangsan chop-fall-PRF tree
'Zhangsan chopped the tree down.' (Lin 2004: 104)

Although the two verbs form a single compound verb, the internal syntactic organization of the two verbal parts has been analyzed to be hierarchical ordered, in that the manner V1 takes the result V2 as a complement (e.g. Liu 2019, Huang 2006, Lin 2004). Therefore, the difference between serializing languages like Édo or Tai language and compounding languages like Mandarin results from head-movement of the result-denoting verb to the matrix manner verb.

(170)



It is worth noting that this analysis seems to go against the assumption that head movement of the result predicate into the matrix verb is the discriminating property of verb-framed languages, as proposed by Folli & Harley (2019; see section 3.3.2). Under this analysis, verb-framed languages must realize the manner component by an adjunct as the verbalizer can only (re-)categorize the incorporated result head. However, as a serializing language like Mandarin differs significantly from verb-framed languages in the morpho-syntactic category of the secondary predicate, i.e. *v*P vs. ResP, *a*P or PP. Due to its verbal category, the matrix *v* head does not need to (re-)categorize the incorporated result predicate. Instead, the matrix *v* can combine with an additional manner modifying root without violating the categorization constraint. Consequently, compounding languages like Mandarin can be classified as a satellite-framed language. This is because the manner of the causing event is realized by the matrix verb, even though this structure comes close to notions of equipollent-framed languages.

Nevertheless, the observation that the verbal resultative secondary predicate may be incorporated into the matrix manner verb does not preclude the possibility that RSVCs uniformly belong to the class of satellite-framed languages (as implicitly suggested by Collins 2002, 1997, Larson 1991). Instead, RSVCs in East Asian languages like Japanese,

Korean or the Turkic language Uyghur have been described as being composed of a transitive causative result verb with the manner verb adjoined to it (Sugar 2019, Tomioka 2006, Ko & Sohn 2015).[37]

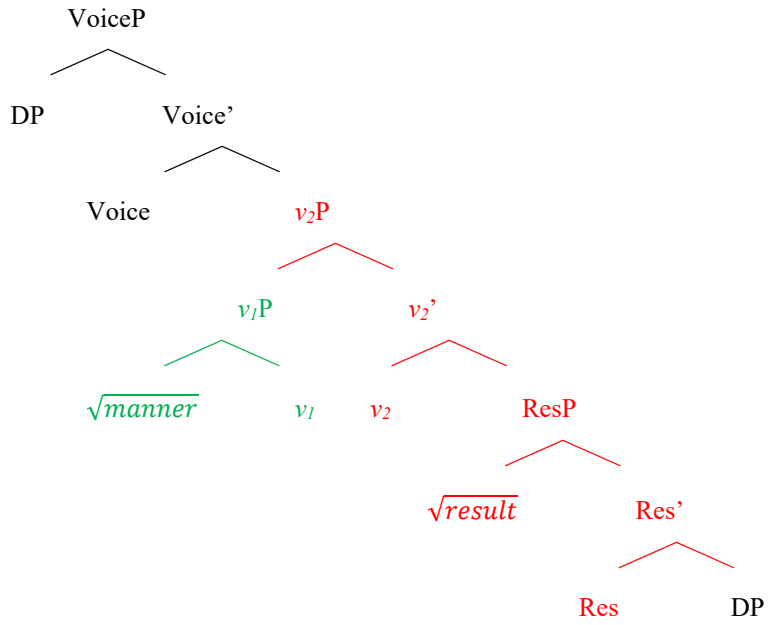
(171) a. *Taro-ga isu-o **osi-taosi**-ta.* JAPANESE
Taro-NOM chair-ACC push-topple-PST
'Taro toppled the chair by pushing it.' (Tomioka 2006: 3)

b. *John-i kaymi-lul **palp-a** **cwuk-i-ess-ta*** KOREAN
John-NOM ant-ACC trample-LK die-CAUS-PST-DECL
'John trampled an ant to death' (Ko & Sohn 2015: 6)

c. *Ahmat mital-ni **uru-ip** **tüzle-iwet-di-ø**.* UYGHUR
Ahmat.NOM metal-ACC hammer-LK flatten-COMPL-PST-3SG
'Ahmat flattened the metal by pounding it.' (Sugar 2019: 14)

Just like verb-framed languages, the manner verb functions as an adjunct to the causative predicate (cf. Mateu 2012a, Talmy 2000 on Japanese). Therefore, the matrix predicate of this class of RSVCs is the causative result verb rather than the manner verb.

(172)



In terms of the structural configuration of resultative structures, serializing languages can be shown to exhibit the same split as non-serializing languages. On the one hand, there are satellite-framed serializing languages like Édò, Lao or Mandarin, in which the manner of the causing event is denoted by the matrix verb which takes a stative or anticausative

[37] Note that RSVCs with transitive secondary predicates do not necessarily need to be classified as verb-framed languages. For example, Collins (2002) argues that with ǂHoan, the transitive nature of the secondary predicate arises from *v*-to-Voice movement of the underlyingly intransitive result-denoting verb.

result verb as its complement. On the other hand, there are verb-framed serializing languages like Japanese, Korean or Uyghur, in which a causative verb functions as the matrix verb while the manner verb is merely adjoined to it. Regarding word order, satellite-framed languages come in two variants with respect to adjacency. While in languages like Édò or Lao the result V2 is realized separately from the manner V1, in languages like Mandarin both verbs form a compound– presumably via head movement. Interestingly, the observed cases of RSVCs in verb-framed languages like Japanese, Korean, or Uyghur seem to suggest that the two verbs are always adjacent to another.[38] The typology of RSVCs is summarized in Table 3below.

	non-adjacent	**adjacent**
Complementation	Édò, Lao	Mandarin
Adjunction	?	Japanese, Uyghur, Korean

Table 3: Type of resultative constructions in relation to linear adjacency.

3.4 Excursus: Force-Extension and the Macro-Event Property

In this section, I briefly return to the issue of direct causation in the context of causatives and verb serialization. As discussed in section 3.1.2, direct causation can be interpreted as the absence of intermediate causers in a causal chain of events. In contrast, causative and resultative constructions that introduce an intermediate causer are necessarily indirect (cf. Wolff 2003). Therefore, as has been highlighted by several authors, the presence of an intermediate causer has significant consequences for the conceptualization of (independent) eventhood (Zimmermann & Amaechi 2020, Bohnemeyer & van Valin 2017, Bohnemeyer et al. 2010). The general intuition is that events that are initiated by a single source can be conceptualized as parts of a single, yet complex macro event whose subevents are in a (direct) causal relation (173)a (Zimmermann & Amaechi 2020, Bohnemeyer & van Valin 2017, Cole 2016, Bohnemeyer et al. 2010, Tomioka 2006 among others).

[38] Potential examples of non-adjacent verb-framed RSVCs come from the Atlantic creole Saramaccan, where the object intervenes in the manner V1 and the causative V2 in an RSVC (i). However, Veenstra (2004, 1996) argues that the causative verb is adjoined to the manner verb – contrary to what we would expect for a verb-framed language. Another potential example comes from the Australian language Wambaya for which Nordlinger (2014) reports that the causative verb can front independently from the manner verb (ii).

(i) *A* ***nákí*** *dí dágu* ***kíi***. SARAMACCAN
3SG hit DET dog kill
'He struck the dog dead.'
(Veenstra 2004: 272)

(ii) ***Guruburr-ardi*** *ngu-ny-u* ***daguma***. WAMB.
be.faint-CAUS 1SG.SUBJ-2OBJ-FUThit
'I am going to knock you out by hitting.'
(Nordlinger 2014: 275)

(173) a. Agent/Causer → e_1 → (Instrument) → e_2 → Patient

e_{MACRO}

b. Agent/Causer → e_1 → Agent/Causer → e_2 → Patient

As the initiation of an event is linked to the presence of an additional agentive or causer argument, complex event formation can be related to the presence of a separate Voice projection in the syntactic derivation (Zimmermann & Amaechi 2020, Tomioka 2006).

In the domain of causatives, this is reflected by the observation that in morphological causatives that embed VoiceP complements, i.e. full transitive and unergative verbs, the causing and caused event can be interpreted to be in an indirect causative relation, whereas causative of unaccusative stative or anticaustive verbs cannot (Lyutikova & Tatevosov 2014, Arkadiev & Letuchiy 2009, cf. Pylkkänen 2008 on morphological causatives embedding complements of different syntactic sizes as discussed in section 2.4 4.2). In Karachay-Balkar, for example, *tyr*-causatives that embed an unaccusative verb like *öl* 'die' contain a causative relation tht must be interpreted as direct (174)a. In contrast, *tyr*-causatives that embed an unergative verb like *cap* 'run' are also felicitous in indirect contexts (174)b (Lyutikova & Tatevosov 2014).

(174) a. *Alim direktor-nu öl-dür-dü.* KARACHAY-BALKAR
Alim director-ACC die-CAUS-PST.3SG
1. 'Alim killed the director.'
2. * (Having paid $10,000 to the killer,) Alim organized the director's assassination.'

b. *Ustaz alim-ni erišü-le-de cap-tyr-dy.*
teacher Alim-ACC competition-PL-LOC run-CAUS-PST.3SG
1. 'The teacher made Alim run at the competition (e.g. by pushing him on the lane).'
2. '(Having convinced the coach that Alim is a good runner,) the teacher organized Alim's running at the competition.' (Lyutikova & Tatevosov 2014: 284)

A similar observation has been observed for SVCs which are described to conceptualize a single but complex event (Zimmermann & Amaechi 2020, Bohnemeyer & van Valin 2017, von Prince 2017d, Cole 2016, Bohnemeyer et al. 2010, Stewart 2001, Givón 1991 among others). In so-called consequential SVCs, the two verbal predicates are in an asymmetric causative relation but are interpreted as subevents of a single macro-event with respect to the modification of temporal and manner adverbials. In Lao, for example, a separate modification of the respective subevents is only felicitous if the two predicates

are combined via the subordinating conjunction *khaw* 'in order to' (175)b. Without the subordinator, separate modification is not felicitous (175)a (Cole 2016).

(175) a. # *Mùù$_4$vaan$_1$nii$_4$, Nòòj$_4$* ***nùng$_5$*** *khaw$_5$* ***khaaj$_3$*** *mùù$_4$nii$_4$* LAO
yesterday Noy steam rice sell today
Intended: 'Yesterday, Noy cooked rice sold today.

b. *Mùù$_4$vaan$_1$nii$_4$, Nòòj$_4$* ***nùng$_5$*** ***khaw$_5$*** *phua$_1$* ***khaaj$_3$*** *mùù$_4$nii$_4$*
yesterday Noy steam in.order.to rice sell today
Intended: 'Yesterday, Noy cooked rice sold today.' (Cole 2016: 83f)

Likewise, consequential SVCs in Igbo reject the modification of contradictory adverbs, as shown in (176)a. In contrast, such modification is felicitous in the context of covert/silent coordination in (176)b – as indicated by the overt realization of the third-person singular pronoun *ya* (Zimmermann & Amaechi 2020 in Ewe, also Bohnemeyer & van Valin 2017 on related observations in the motion domain).

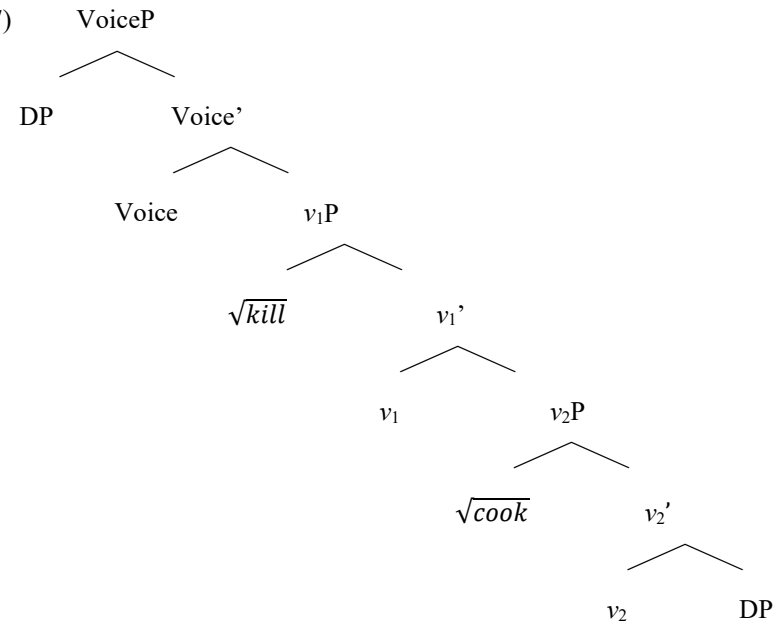
(176) a. # *Uche* ***gbù-rù*** *òkúkò ósííso* ***sí-e*** *nwáyòò~nwáyòò.* IGBO
Uche kill-PST chicken quickly cook-SFX RED~slowly
Intended: 'Uche killed the chicken quickly and killed it slowly.'

b. *Uche* ***gbù-rù*** *òkúkò ósííso* ***sí-e*** ***ya*** *nwáyòò~nwáyòò.*
Uche kill-PST chicken quickly cook-SFX 3.SG RED~slowly
'Uche killed the chicken quickly and killed it slowly.' (Zimmermann & Amaechi 2020)

Therefore, consequential SVCs behave like lexical causative predicates, with regard to adverbial modification, and express a direct relation between the causing event and the caused event without any intervening causers or causing events (Zimmermann & Amaechi 2020, Bohnemeyer & van Valin 2017). As a result, consequential SVCs can be analyzed to embed two *v*Ps under a single Voice projection that ties the two individual events together to a single macro-event (Zimmermann & Amaechi 2020, see Cole 2016 for similar intuitions, Tomioka 2006, Stewart 2001).[39]

[39] Note that the tree in (177) oversimplifies the structural properties of the individual verbs as both *gbú* 'kill' and *sí* 'cook' are potentially more complex, each introducing their own result states. It is, therefore, possible that both predicates are combined via adjunction to a third *v* head that introduces a macro-event variable (compare Stewart 2001 for an adjunction analysis of consequential SVCs). For the purposes of this thesis, the configuration reflects the general structural properties of consequential SVCs.

(177)



Nevertheless, consequential SVCs differ significantly from resultative SVCs in terms of the nature of the subevent. In consequential SVCs, both predicates typically introduce two separate action events that are performed by a single agent. In contrast, (transitive) resultative SVCs only entail a single action event which causes the change-of-state of the patient. Consequently, resultative SVCs and consequential SVCs exhibit different syntactic and semantic properties (Zimmermann & Amaechi 2020, Cole 2016, Stewart 2001).

3.5 Summary

This chapter has discussed resultative complex predicates in which the manner and result component are denoted by two individual predicates. Due to the categorization constraint, one of the two predicates must be realized by a pre-categorized constituent which gives rise to two distinct resultative constructions. Firstly, a manner matrix verb denotes the manner of the causing event whereas the result state is realized by an *a*P or PP in its complement position, i.e. resultative secondary predication. Secondly, the causing event which is entailed by the causative matrix verb is identified by an adjoined manner adjunct, i.e. the means construction. While both constructions share the general semantic properties laid out by adverbial modification and interpretation, e.g. direct causation, they differ with respect to their morphosyntactic properties, e.g. the morphosyntactic size of the adjoined predicate in the means construction. Cross-linguistically, there is a split in which construction is preferred in the expression of resultative semantics. On the one hand, there are satellite-framed languages which primarily use resultative secondary predication. On the other hand, there are verb-framed languages that primarily use the means construction.

Notably, this split is also observed in serializing languages where both components are realized by verbal elements. Here, the main verb status of either the manner or result verb determines the respective type of construction. In the following chapters, I turn to resultative construction in serializing Oceanic languages, which exhibit significant (micro)variation in this domain.

Chapter 4: RSVCs in Oceanic

This chapter provides an overview of resultative constructions in Oceanic languages, a subgroup of the Austronesian language family spoken on the islands of the Pacific. In Oceanic languages, resultative meaning is typically expressed by RSVCs (cf. Verkerk & Frostad 2013). The significance of Oceanic languages for the study of resultative (serial verb) constructions results from the morphosyntactic variation observed regarding the morphosyntactic and semantic properties of the result denoting verb – typically the V2 – in Oceanic RSVCs. Based on a survey of 40 languages from different subgroups of the Oceanic language family, I identify three major patterns with respect to the morphosyntactic status of the result denoting V2: (i) lexical causative verbs in Type-A-RSVCs (178)a, (ii) morphological causative verbs in Type-B-RSVCs (178)a, and (iii) stative PC or anticausative verbs in Type-C-RSVCs.

(178) a. **Type-A-RSVCs:**

Ma ***saa*** ***tiwiye*** *pwesye.* DAAKAKA

REAL hang break branch

'She broke the branch by hanging onto it.' (von Prince 2015: 326)

b. **Type-B-RSVCs:**

Sā ***solo*** ***fa'a-mamā*** *e* *Pita* *le* *laulau* SAMOAN

PST wipe CAUS-flat ERG PETER SPEC table

'Pete cleaned the table by wiping it.'

c . **Type-C-RSVCs**:

To *ni-**bol*** ***madamdaw*** *no-goygoygi* *qetenge* *nan.* MWOTLAP

then AO-hammer soft ART-roots plant ANAPH

'Then he hammered the roots soft.' (François 2004: 114)

The data of this survey comes primarily from grammar description that usually do not put a special focus in resultative construction. In fact, most grammars only present a very limited set of data, mentioning the general pattern of the language only briefly (but see Bradshaw 1982 for a notable expection on Oceanic languages in Papua New Guinea). Therefore, this chapter does not intend to make any claims about the underlying morphosyntactic or semantic structure of individual languages but focus on general tendencies that hold across languages. Instead, these internal structure of Type-A- and Type-B-RSVCs will be subject of the case studies on Daakaka and Samoan in the next two parts.

While Type-A/B/C-RSVCs are single-marking SVCs in which TMA and subject marking is only realized once per construction, resultative meaning is also commonly expressed by multiple-marking SVCs in Oceanic languages (Verkerk & Frostad 2013, Bradshaw 1982). Here, the result-denoting V2 exhibits its own marking for TMA, as demonstrated by Daakaka in (179).

(179) ***Ya=m*** ***te*** *lee* *ente* ***ma*** ***mwelili.*** DAAKAKA
3PL=REAL cut.TR tree DEM REAL small
'They cut the trees small.'

However, the serializing status of multiple-marking SVCs has been questioned recently on morphosyntactic and semantic grounds (von Prince 2019b, 2011b on Daakaka, Cleary-Kemp 2015 on Koro). Instead, the V2 has been re-analyzed as a TP-sized adjunct to the matrix predicate. In section 4.3, I present novel data from a pilot study on the prosodic properties of multiple-marking SVCs in Daakaka that tentatively support this claim. Consequently, multiple-marking SVCs are excluded from the following discussion.

This chapter is structured as follows. In section 4.1, I provide a brief introduction into the Oceanic language family with a focus on verb serialization. In section 4.2, I investigate the observed microvariation in Oceanic languages. Based on the morphosyntactic properties of the result-denoting V2, I propose a classification based on three classes based on the event and argument structure of the respective constructions (178): lexical causative V2, morphological causative V2 and stative/anticausative V2. I, then, turn briefly to additional instances of microvariation with respect to the independent status of verbal predicates. In section 4.3, I briefly turn to multiple-marking RSVCs suggesting that they instantiate a distinct type of construction.

4.1 Typological Overview

The Oceanic languages are part of the Austronesian language family, spoken by about 386 million speakers from Madagascar in the West, the Easter Islands in the East, Taiwan and Hawai'i in the North and New Zealand in the South (Blust 2013, Lynch et al. 2002). With over 1,254 languages, Austronesian is the second-largest language family in the world (Ethnologue 2019a).

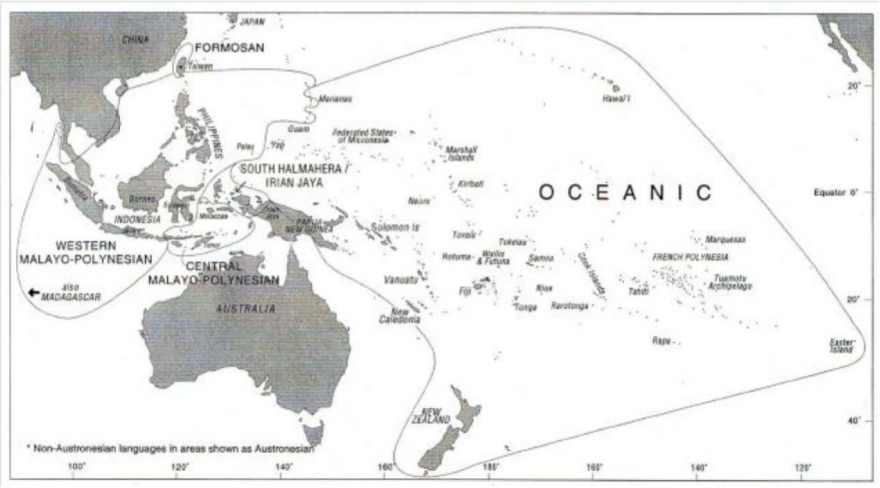


Figure 3: The Oceanic languages and the Austronesian family (Lynch et al. 2002)

Within Austronesian, the Oceanic language family is a well-established branch that belongs to the Malayo-Polynesian subgroup from which it separated approximately 4200 years ago. It has been argued that this separation the settlement of the Pacific islands by the Lapita people from coastal areas on the island of New Guinea (Blust 2013, Gray et al. 2009, Lynch et al. 2002).

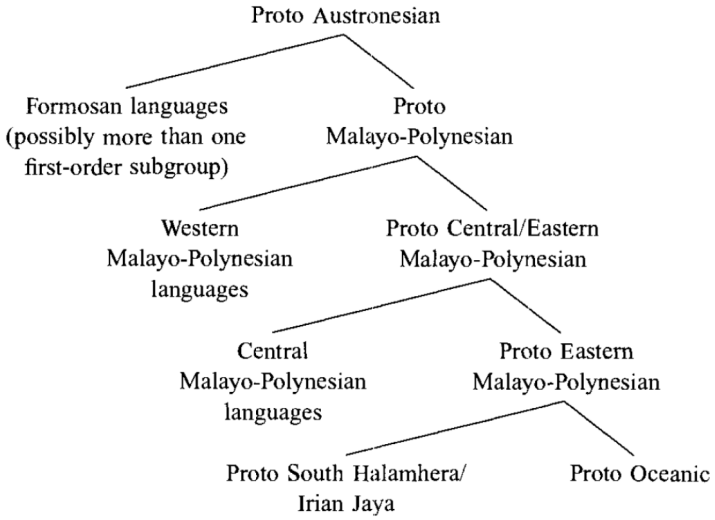


Figure 4: Higher order Austronesian subgroups (Lynch et al. 2002)

The Oceanic family comprises about 525 languages in Pacific region, from the coastal areas of Northern and Eastern New Guinea in the West to the Easter Islands in the East, and from Hawai'i in the North to New Zealand in the South. (Lynch et al. 2002).

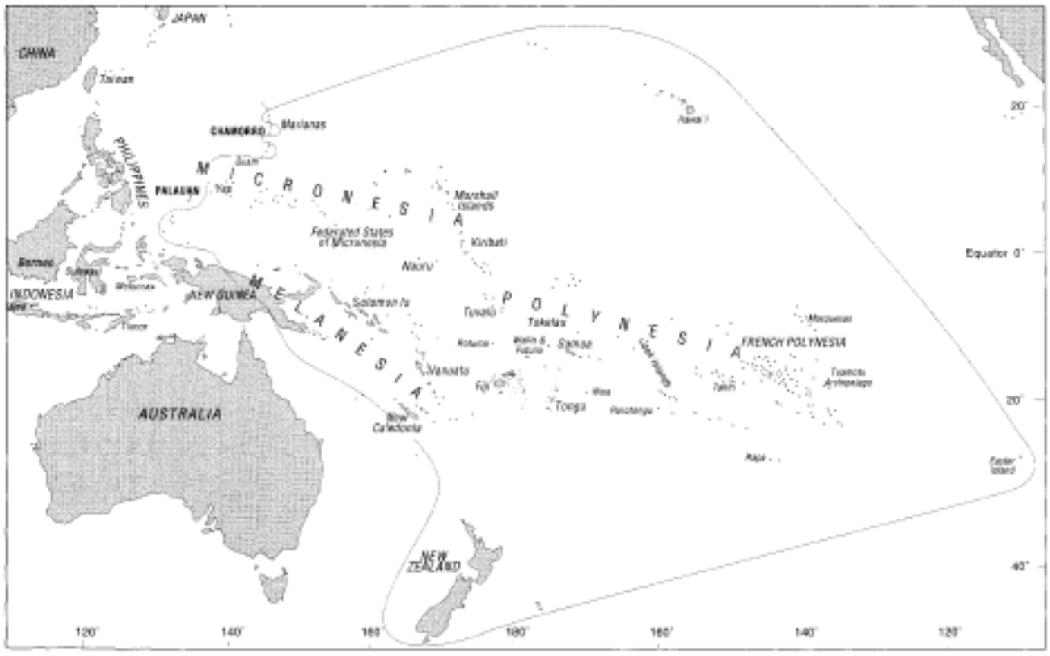


Figure 5: The boundaries of the Oceanic group (Lynch et al. 2002: 5)

Traditionally, this area has been divided into three major cultural and linguistic areas, Melanesia, Micronesia and Polynesia. However, the internal classification of Oceanic languages is still under investigation; while groupings have been traditionally drawn along geographical and cultural lines, more recent comparative studies suggest that internal subgroupings are more fine-grained. In particular, the 'Melanesian' languages rather consist of several linkages without forming a coherent subgroup. Furthermore, due to complex contact situations including multiple waves of migration, the overall picture is less clear than initially presented (Ross et al. 2016, Lynch et al. 2002).

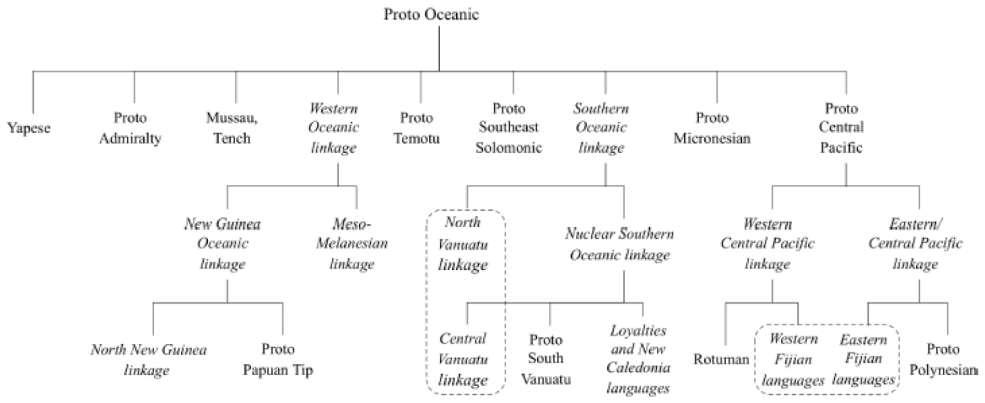


Figure 6: Schematic diagram showing the subgrouping of Oceanic languages (Ross et al. 2016).

Even though Oceanic languages share a common ancestor (i.e. Proto-Oceanic), they differ widely with respect to their areal distribution and speaker population as well as their morphological, syntactic or phonological properties (Lynch et al. 2002, Ross 2004). While

Polynesian languages tend to be more widely geographically distributed with a greater speaker population – including Samoan with roughly 400,000 speakers (Ethnologue 2019c) –, 'Melanesian' languages tend to be spoken by small communities (>5,000 speakers) in smaller areas. As a result, Vanuatu displays the world's highest linguistic density (François et al. 2015). Moreover, 'Melanesian' languages are in a contact situation with Papuan languages, in contrast with Micronesian or Polynesian languages. It is assumed that this contact situation had some major influences on the grammar of the languages in this region, such as the shift form Austronesian VO to Papuan OV word order in Papuan Tip languages or the heavy use of SVCs in 'Melanesian' languages in comparison to Polynesian and Micronesian languages (Blust 2013, Verkerk & Frostad 2013, Crowley 2002, Bradshaw 1982). Although Oceanic languages share a lot of common morphological, syntactic and phonological properties, some significant variation has been observed across the subgroups. Just to mention two major tendencies: (i) Micronesian and 'Melanesian' languages primarily exhibit a SVO or SOV word order whereas most Polynesian languages typically verb-initial VSO/ VOS word order; (ii) most 'Melanesian' languages lack morphological case whereas Polynesian languages show ergative or even split-ergative case marking (Lynch et al. 2002).

The phenomenon of verb serialization is well-established throughout the Oceanic family, as well as in Oceanic creoles (Cauchard 2018, Pearce 2017, Barth & Anderson 2015, Cleary-Kemp 2015, Massam 2013, Massam et al. 2016, Verkerk & Frostad 2013, Næss 2012, Otsuka 2012, Næss & Boerger 2008, Bradshaw 2010a, Senft 2008, Schneider 2007, Thieberger 2007, François 2006, Lichtenberk 2006, Margetts 2005, Bril & Ozanne-Rivierre 2004, Crowley 2002, 1987, Meyerhoff 2001, Lynch 2004, Lynch et al. 2002, Durie 1997, Bradshaw 1993, 1982, Early 1993, Sperlich 1993, Hamel 1993, Bisang 1986, Johnston 1978 among others).[40] Based the typological distribution of SVCs, Verkerk & Frostad (2013) show that verb serialization has been part of Oceanic grammar since Proto-Oceanic since verb serialization is found in languages of all lower-level subgroups (see

[40] Note that in some Oceanic languages the status of SVC-like structure is controversial. On the one hand, most Micronesian and Polynesian languages have rather small inventory of derivational morphology which makes the determination of the categorial status of lexical elements with SVCs sometimes problematic. This is especially true for PC roots which can exhibit nominal, verbal, adjectival or adverbial function without morphology indication of their lexical status (see section 5.2.1 on Samoan zero-derivation; cf. van Lier 2017, van Lier 2016, François 2017, Massam 2005, Crowley 2002, Ross 1998, Broschart 1997 for a discussion on Oceanic, see also Nuger 2016, Chung 2012 on related Western Malayo-Polynesian). On the other hand, some authors differentiate SVCs from verbal compounding in cases where the meaning of the construction does not seem to be compositionally derived from its parts or the elements within such constructions cannot occur as independent verbs (Moyse-Faurie 2015, Thieberger 2007, Early 1993, Crowley 1987, Bugenhagen 1995, Bradshaw 1982, see Crowley 2002 for a more general discussion).

Figure 7) (cf. Ross 2004, Crowley 2002). As other Austronesian languages usually appear to lack instances of verb serialization, occurrences of SVCs have been attributed to language contact with serializing Papuan language (Blust 2013, Bradshaw 1982).

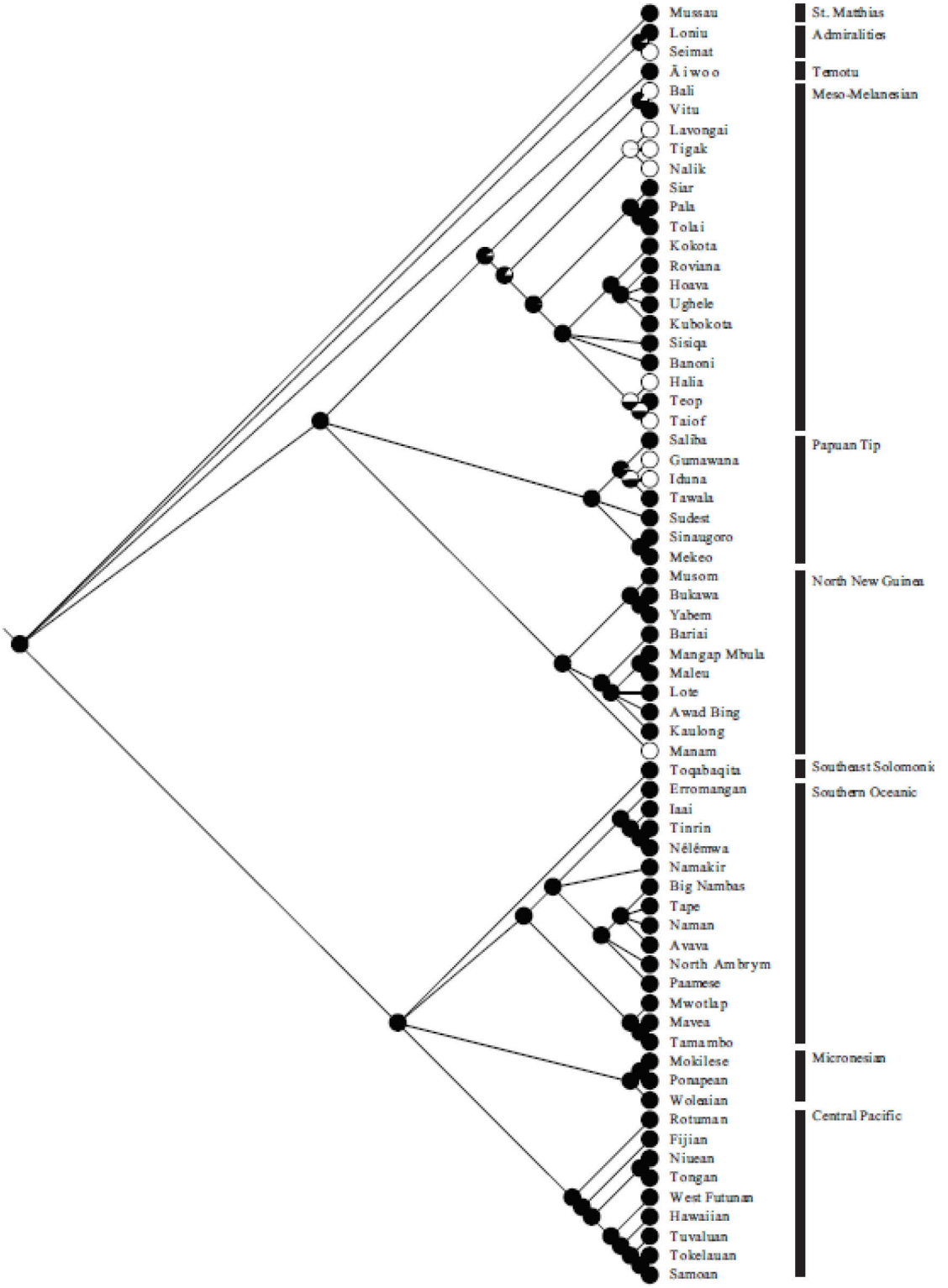


Figure 7: The evolutionary history of the unmarked SVC strategy in Oceanic languages. Black nodes indicate the presence of SVCs in the language or language subgroup; white nodes indicate its absence (Verkerk & Frostad 2013).

In Oceanic languages, verb serialization is typically used to express resultative meaning. In their survey on resultative and manner expression, Verkerk & Frostad (2013) demonstrate that the majority of Oceanic languages uses verb serialization to convey such meaning (38 out of 66 languages), not including cases in which on the manner or result denoting element shows verbal properties but cannot occur as an independent verb outside of the construction (see discussion in section 4.2.4). The distribution of RSVCs is shown in the map below.

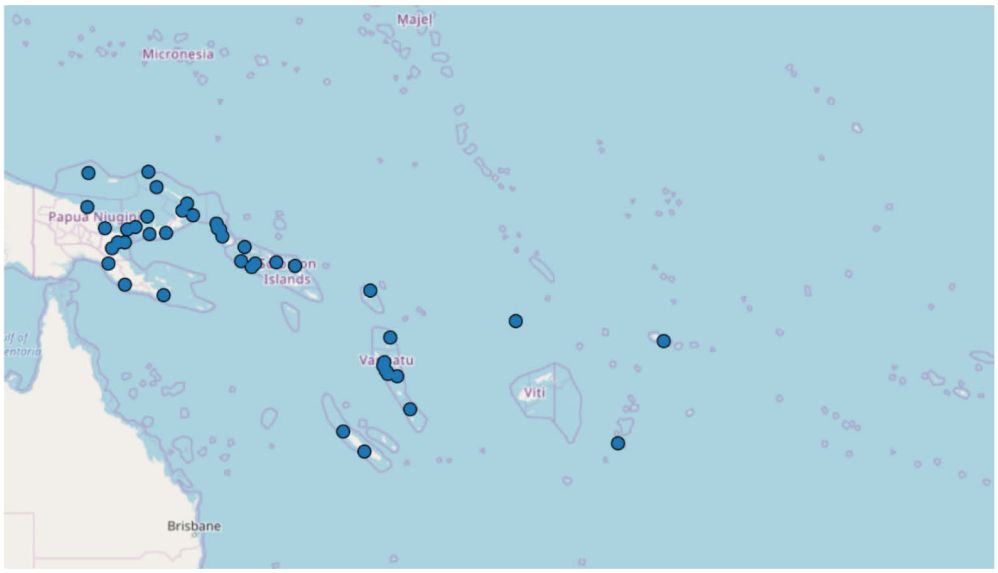


Figure 8: Distribution of RSVCs based on the survey in Verkerk & Frostad (2013).

However, Oceanic RSVCs do not form a coherent class with respect to morphosyntactic features across languages. On the one hand, RSVCs differ with respect to the transitivity of the result-denoting verb. While some languages exhibit transitive causative verbs, other languages exhibit intransitive stative or inchoative verbs. Crucially, RSVCs with causative verbs can be further divided according to the presence of causative morphology. On the other hand, resultative meaning can be expressed by single marking RSVCs in which TMA values are marked only once for the whole construction or by multiple marking RSVCs in which each verb is individually marked for TMA. In the next section, I discuss this instance of microvariation in the context of Oceanic RSVCs by classifying single-marking RSVCs in three basic types according to the morphosyntactic properties of the result-denoting verb. Note that I exclude multi-marking RSVCs from this discussing as these constructions differ significantly with respect to the morphosyntactic status of the result-denoting predicate (see section 4.3).

4.2 Single-marking RSVCs

In a single marking SVC, both verbs are marked by a single TMA marker that usually precedes the initial verb. In some languages, the non-initial verb also carries a single transitive marker or object agreement. In the following, we will see that the distribution verbs that can appear in the V1 or V2 slot are semantically determined. While manner verbs that encode the manner of an action are restricted to functioning as the V1, result verbs that encode a result-state or causative can only occur as the V2. Crucially, the causative V2s may be either lexical causatives or morphological causatives. Therefore, the ontological root classes are in complementary distribution, as expected from the discussion in chapters 2 and 3. With respect to argument structure, the manner verb can be either unergative or transitive whereas the result-denoting verb can be either unaccusative or transitive. In the following, I present a classification of RSVCs based on transitivity as well as their derivational status.

4.2.1 Type A: Bare transitive V2

In several Oceanic languages, the result-denoting predicate in an RSVC is a causative verb. The v1 typically denotes the manner of an action that causes the change-of-state entailed by the causative V2. This is illustrated by the examples below. Note that the relative order of the predicate is not affect by the basic word order of the language, e.g. SVO in Daakaka (180)a, SOV in Saliba/Logea (186) and VSO in Hoava .

(180) a. *Ma* ***saa*** ***tiwiye*** *pwesye.* DAAKAKA
3SG.REAL hang break.TR branch
'She broke the branch by hanging onto it.' (von Prince 2015: 326)

b. *Po* ***kimos*** ***tip*** *hiang.* KAULONG
3PL.SUBJ spit make.wet 3SG.MASC
'They spat upon him.' (Ross 2002: 402)

c. ***Navahu*** ***booboha*** *bono sinivi.* TEOP
hit break(TR) ART canoe
'(He) hit the canoe to pieces.' (Mosel & Thiesen 2007: 114)

For the Lolovoli dialect of East Ambae (Ambae; Northern Vanuatu, Southern Oceanic), Hyslop (2001) describes Type-A-RSVCs in which lexical causative verb functions as the result-denoting V2 whereas the V1 denotes the manner of the causing action.

(181) a. *Wai mo **tuli waga** tanga-na.* EAST AMBA
water REAL throw break.open testicles-3SG.POSS
'The water threw him splitting open his testicles.'

b. *Danuta go-**gasi dange** na boele ngihie.*
Danuta 2SG-bite pull.out ACC bottle DEM
'Danuta, bite open (the lid of) that bottle.'

c. *Mo **bile duru** na rau-i vie.*
REAL step.on poke.through ACC leaf-CONST giant.taro
'She stepped through the giant taro leaves.' (Hyslop 2001: 283)

The list of verbs in (182) shows the complementary distribution of verbs in RSVCs in East Ambae (Hyslop 2001: 283). Crucially, verbs that function as V1 all lexicalize a manner component, while the causative verbs that function as V2 denote a result state.

(182) a. Verbs that functions as V1:
bala 'pick up with tongs', *bile* 'step.on', *gara* 'burn', *gasi* 'bite', *gina* 'pinch', *tai* 'chop', *teve* 'cut', *tisu* 'poke', *tuli* 'throw', *vara* 'pull.down', *vili* 'smash'

b. Verbs that functions as V2:
dange 'pull.out', *dare* 'break', *duru* 'poke.through', *heve* 'rip', *kore* 'break', *lingi* 'spill', *roto* 'break', *volo* 'break', *waga* 'break.open', *wahe* 'divide,share', *goro* 'block'

Notably, all verbs that function as V2 are lexical causative verbs. These verbs can undergo the (anti-)causative alternation with the anticausative prefix *ma-* that derives anticausative forms from causative verbs (Hyslop 2001).

(183) a. *Nu kore na gai.* EAST AMBAE
1SG.TEL break ACC wood
' I broke the stick.' (Hyslop 2001: 318)

b. *Gai u **ma**-kore*
wood TEL ANTICAUS-break
'The stick is broken.' (Hyslop 2001: 318)

As the V2 slot is restricted to transitive lexical causatives, both verbs share their argument structure in that only a single subject and a single object can be projected for the whole RSVC (as illustrated in Figure 9). Note, however, that object sharing might not be discriminating feature of Oceanic Type-A-RSVCs, as the case study on Daakaka shows that unergative manner verbs can occur in the V1 slot (see chapter 8).

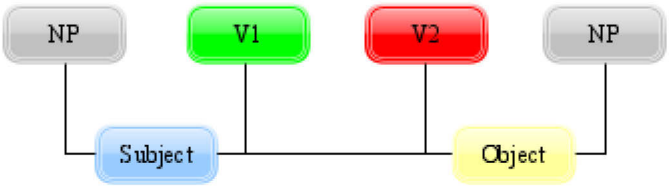


Figure 9: Overlapping argument structure of transitive manner V1 (green) and transitive result-denoting V2 (red) in Oceanic Type-A-RSVCs.

In Manam (Northern New Guinea; Western Oceanic), Lichtenberk (1983) reports a similar distribution of verbs in RSVCs. While the V1 is reserved for verbs that specify the manner of an action, only lexical causative verbs can act as V2.

(184) a. *ʔái* *u-**tara-séreʔ**-i* MANAM
tree 1SG.REAL-chop-break-3SG.OBJ
'I chopped the tree.' (Lichtenberk 1983: 216)

b. *Móli* *i-**ʔara-sísiʔ**-i*
orange 3SG.REAL-bite-peel-3SG.OBJ
'He peeled the orange with his teeth.' (Lichtenberk 1983: 215)

c. *Moata~móata* *i-**dua-pósaʔ**-i*
RED-worm 3SG.REAL-stomp-break-3SG.OBJ
'He crushed the worm under his feet.' (Lichtenberk 1983: 215)

The distribution of verbs below are extracted from the examples given in Lichtenberk's (1983) grammar and mirrors the verbs in East Ambae (cf. Bradshaw 1982: 52). [41]

(185) a. Manner denoting verbs (V1):
dau 'hitting with feet, stomp', *ʔara* 'bite', *ʔin* 'pinch', *ʔoro* to cut', *nagu* 'to prick', *roʔa* 'throw', *tara* 'to chop', *tata* 'hit sth. against sth.', *zaŋ* 'to pound, punch'

[41] In Lichtenberk (1983), the phenomenon described here is not discussed under the label 'serial verb constructions' but 'classificatory prefixes' as the manner V1 appears in a phonologically form reduced by lacking a thematic consonant in word final position that is obligatory for the occurrence in isolation. A phonological or morphological reduction of the manner V1 has been reported in several Oceanic languages. In Daakaka Type-A-RSVCs, for example, the manner V1 appears in its suppletive intransitive verb form. Therefore, transitivity is only marked on the causative V2 (i) (von Prince 2015).

(i) a. *Bong* *ma* ***te*** *lee* *ente.* b. *Bong* *ma* ***ta*** ***tiwiye*** *lee* *ente.* DAAK.
Bong REAL cut.TR tree DEM Bong REAL cut.ITR break.TR tree DEM
'Bong cut the tree.' 'Bong broke the tree by cutting it.'

Morphological or phonological reduced manner V1 have also been observed in Paamese (Central Vanuatu, Southern Oceanic; Crowley 2002), Navahaq (Malekula; Central Vanuatu, Southern Oceanic; Dimock 2009) and Maskelynes (Uluveu; Central Vanuatu; Southern Oceanic; Healey 2013).

b. Result denoting verbs (V2):
pasiʔ 'to take out, release', *poatoʔ* 'to break off', *posaʔ* 'to crush, crack, shatter, squash', *sisiʔ* 'to peel', *toba* 'to pierce, *toto* 'to cut all the way through'

As in East Ambae, the argument structure of both the manner and the lexical causative verbs overlap with a single subject and single object for the whole construction as both verbs are obligatorily transitive.

In Saliba/Logea (Milne Bay Province; Papuan Tip, Western Oceanic), Margetts (2005) observes that only transitive causative verbs occur as the result-denoting V2. In contrast, only manner verbs occur in the V1 slot. Compare the examples below:

(186) a. *Yo-**koi-kesi**-ø.* SALIBA/LOGEA
3SG-hit-break-3SG.OBJ
'He broke it.'(Margetts 2005: 70)

b. *Kulu-na* *ye-**gwali-lapai**-ø* *kewokewowo* *unai*
head-3SG.POSS 3SG-spear-pierce-3SG.OBJ padding.canoe LOC
'His head cracked through the bottom of the canoe.'
(Margetts et al. 2017: Boneyawa_22DS_0051)

c. *Yaya-miu* *ye-na* *niu* *kwa-**woli-nonohai**-i*
aunt-2PL.POSS POSS1-3SG.POSS coconut 2PL-scrape-prepare-TR
'You have to scrape your aunt's coconut read.'
(Margetts et al. 2017: SineluguDamaya_01_0051)

Margetts (2005) provides a list of 39 verbs attested to occur as the V2, of which 19 are monomorphemic verbs. Most of these verbs are lexical causative verbs (187)a or change-of-location verbs (187)b.

(187) a. Result-denoting V2: SALIBA/LOGEA
godu 'break', *kesi* 'break', *lapai* 'pierce', *pulisi* 'tear', *utusi* 'snap', *liga* 'cook', *nonoha-i* 'pre pare', *yawasi* 'clean'

b. Verbs of movement:
basiyei 'aside', *isini* 'raise', *kalatei* 'hold down', *lage* 'arrive', *pesa* 'exit', *piloi* 'turn', *tolo* 'stand/get up',

Similar patterns have been observed for a range of Oceanic languages, in particular 'Melanesian' languages such as Unua (Malekula; Central Vanuatu, Southern Oceanic; Pearce 2017), Daakaka (Ambrym; Central Vanuatu, Southern Oceanic; von Prince 2015), Nafsan (Efate; Southern Vanuatu, Southern Oceanic; Thieberger 2006), Tamambo (Malo;

Northern Vanuatu, Southern Oceanic; Jauncey 2011), Hoava (New Georgia; Northwest Solomonic; Davis 2003), Toqabaqita (Malaita; Southeast Solomonic; Lichtenberk 2006), Teop (Bougainville; Northwest Solomonic; Mosel & Thiesen 2007), Kaulong (New Britain; Southwest New Britain, Western Oceanic; Ross 2002) or Gedaged (PNG; North New Guinea, Western Oceanic; Mager 1952, also Bradshaw 1982 for an overview on Oceanic languages in PNG).

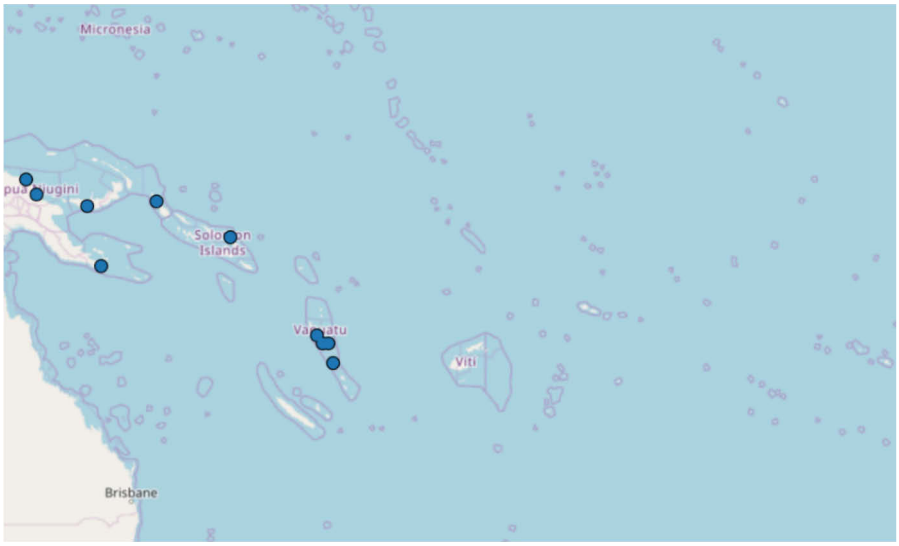


Figure 10: Distribution of languages that exhibit Type-A-RSVCs.

4.2.2 Type B: Causativized V2

A second type of single-marking RSVCs involves a causativized V2. This is exemplified in (188)-0, where the result-denoting V2 is derived by the causative prefix, which is a reflex of Proto-Oceanic **pa-/paka-* (Verkerk & Frostad 2013, Bril 2007). Again, the relative order of the verbs is not affected by the basic word order of the language, e.g. in SVO in Seimat (188)b, SOV in Saliba/Logea (192) and VSO in Samoan (189).

(188) a. *Ia* ***zulu*** ***va-mate-a*** *mamaneke* *mago* UGHELE
3SG burn CAUS-dead-3SG.OBJ woman devil
'He burned the female devil to death.' (Frostad 2012: 194)

b. *Nga* ***tahuni*** ***ha-paxe*** SEIMAT
1SG smoke CAUS-dry
'I dried (the pandanus) by smoking it.' (Wozna & Wilson 2005: 57)

c. *Manei* *n-e-ke* ***kumai*** ***fa*** ***knaso-i*** *botolo swepi* KOKOTA
3SG REAL-3SG-PRF drink CAUS be.empty-OBJ.3SG bottle soft.drink
'He drank empty this bottle of soft drink.' (Palmer 2009: 209)

As seen in Type-A-RSVCs, the V1 specifies the manner of an action whereas the embedded PC-root of the morphological causative V2 denotes the result state. As both verbs are typically transitive, the argument structure of both manner-V1 and result-V2 is shared (see Figure 9). Therefore, the crucial difference between Type-A- and Type-B-RSVCs is the type of causative V2: while Type-A-RSVCs comprise lexical causatives, Type-B-RSVCs exhibit morphological causatives derived by **pa-/paka-*.

In Samoan (Polynesian, Central Pacific), Mosel (2004) observes that in RSVCs, the result-denoting V2 is derived by the causative prefix *fa'a-*, while a transitive manner verb functions as V1. In (189), the causativized verb is a stative PC-root.

(189) a. *E* ***lamu*** ***fa'a-malū*** *ai* *mea* *'ai* SAMOAN
GEN chew CAUS-soft he thing eat
'He chews the food soft.' (Mosel & So'o 2000: 62)

b. ***Sele*** ***fa'a-pu~pu'u*** *le* *lauulu* *i* *se* *seleulu*
cut CAUS-RED~short SPEC hair OBL UNSPEC scissors
'cut the hair short with scissors' (Mosel & So'o 2000: 26)

c. *Suga,* *alu* *e* ***tapena*** ***fa'a-lelei*** *le* *fale.*
girl go GEN tidy.up CAUS-good SPEC house
'Girl, go and tidy up the house so that it looks good.' (Mosel 2004: 277)

Other examples, mentioned in the paper are listed below:

(190) a. *tipi* *fa'a-nini'i* 'cut into small pieces' SAMOAN
b. *su'i* *fa'a-'umi* 'sew and make long (a necklace)'
c. *fau* *fa'a-maualuga* 'build high'
d. *'eli* *fa'a-maualalo* 'dig deep'
e. *fau* *fa'a-lāpotopoto* 'build round'
f. *su'i* *fa'a-mau* 'sew fast' (Mosel 2004: 277)

However, the result denoting V2 is not restricted to causativized stative PC-verbs. Causativized anticausative verbs such *pa'u* 'fall' can also appear in this position, as shown in (191). In chapter 6, I investigate the morphosyntactic and semantic properties of Samoan RSVCs in more detail.

(191) ***Tipi*** ***fa'a-pa'ū*** *le* *lā'au.* SAMOAN
cut CAUS-fall SPEC tree
'Cut the tree down.' (Mosel & So'o 2000: 143)

In contrast to Samoan, other languages exhibit both Type-A- and Type-B-RSVCs. For Saliba/Logea, Margetts (2005) reports that in addition to lexical causatives such as *godu* 'break', *pulisi* 'tear' or *yawasi* 'clean', morphological causatives also function as V2.

(192) a. *Ye-**koi-he-mwaloi**-ø.* SALIBA/LOGEA
3SG-hit-CAUS-dead-3SG.OBJ
'He hit it dead.' (Margetts 2005: 70)

b. *Ye-**nuku-he-beku**-ø*
3SG-shake-CAUS-fall-3SG.OBJ
'He shakes it down.' (Margetts et al. 2017: FrogStory_02AZ_0066)

c. *Ya-**boli~boli-he-poko**-ø*
1SG-RED~cut-CAUS-round-3SG.OBJ
'I am cutting it round.' (Margetts et al. 2017: Garden_01CY_0210)

Margetts (2005) provides the following list of causativized verbs attested in a Type-B-RSVCs. As illustrated in (193), all causativized verbs are either intransitive stative or anticausative verbs.

(193) a. PC-verbs: SALIBA/LOGEA
he-bida 'CAUS-dirty', *he-dudulai* 'CAUS-straight, *he-gagili* 'CAUS-small,
he-laki 'CAUS-big', *he-masahala* 'CAUS-clear, *he-mwayau* 'CAUS-full,
he-mwaloi 'CAUS-dead, *he-pitali* 'CAUS-dry', *he-posi* 'CAUS-white

b anticausative verbs
he-beku 'CAUS-fall, *he-yoli* 'CAUS-sink, *he-you* 'CAUS-bend,
ʔhe-pesa 'CAUS-exit, *ʔhe-sigi* 'CAUS-move', *ʔhe-dui* 'CAUS-bathe' (Margetts 2005: 70)

Notably, neither transitive nor unergative verbs are reported to combine with causative marker *he-* within Type-B-RSVCs.[42] Therefore, the distribution of the causative prefix is governed by the lexical semantics of the root. While lexical causative verbs can function as the V2 without any additional morphology, unaccusative roots must be derived by the causative prefix *he-* to enter an RSVC construction (cf. section 4.2.1 above).

A similar split has been described for Siar-Lak (New Ireland, Western Oceanic). Here, Rowe (2005) notes that in RSVCs, the initial verb describes the manner of a causing action. As in Saliba/Logea, the result state can either be expressed by a causativized PC-root (194) or a lexical causative (195).

[42] This generalization holds under the assumption that (?)-marked verbs in (193) are unaccusative verbs in Saliba/Logea which needs to be confirmed in future research.

(194) a. *I* ***gósgós*** ***a-mónóng*** *pas* *dit.* SIAR-LAK
3SG dance CAUS-busy COMPL2 3PL
'It distracted them by dancing.' (Rowe 2005: 75)

b. *Dit* ***ngas*** ***a-mat*** *sói* *a-rop* *dit.*
3PL bite CAUS-die away CAUS-finish 3PL
'They bit them all dead.' (Rowe 2005: 75)

(195) a. *I* ***ngot*** ***kubat*** *i.*
3SG bite break 3SG
'He broke it by biting.' (Rowe 2005: 69)

b. *Ap* *i* ***woh*** ***tat*** *pas* *i*
and 3SG smell uncover COMPL2 3SG
'and it found it by smelling.' (Rowe 2005: 69)

In general, Type-B-RSVCs are well-established throughout the Oceanic language family, although their distribution is clustered in an area close to PNG. Similar constructions have been reported in a number of languages such as Banoni (Bougainville; Northwest Solominic, Western Oceanic; Lincoln 1976), Kokota (Santa Isabel; Northwest Solomonic, Western Oceanic; Palmer 2009), Kubokota (Ranonga; New Ireland, Western Oceanic; Chambers 2009), Ughele (Rendova; Northwest Solomonic, Western Oceanic; Frostad 2012), Nêlêmwa (New Caledonia; Southern Oceanic; Bril 2007) and Rotuman (Central Pacific, Central-Eastern Oceanic; Churchward 1940).

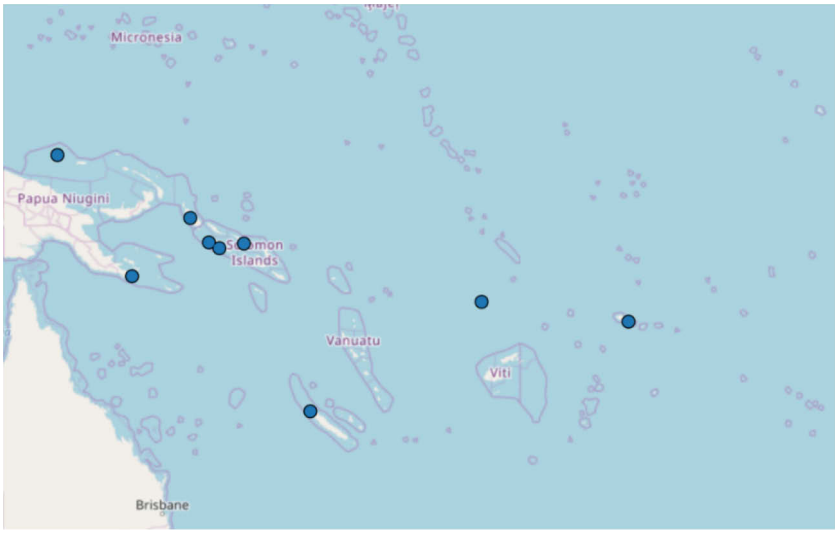


Figure 11: Distribution of Type-C-RSVCs in Oceanic languages.

4.2.3 Type C: Bare intransitive V2

Although the focus of the case studies will be on RSVCs with a causative V2, I shall briefly sketch out the properties of this Type-C-RSVCs in which the result state is expressed by a stative PC-verb. This type of Oceanic RSVCs is exemplified below.

(196) *Wei* ***duu*** ***marri*** *table.* TÎRÎ
1SG.FUT wipe be.dry table
'I will wipe the table dry.' (Osumi 1990: 215)

(197) *Ne* ***hihi-kū*** *e* *ia* *haaku* *ulu.* NIUEAN
PST cut-short ERG 3SG 1SG.GEN hair
'She cut my hair short.' (Massam et al. 2016: 11)

(198) *To* *ni-**bol*** ***madamdaw*** *no-goygoygi* *qetenge* *nan.* MWOTLAP
then AO-hammer soft ART-roots plant ANAPH
'Then he hammered the roots soft.' (François 2004: 114)

In contrast with Type-A- and Type-B-RSVCs, the argument structure in Type-C-RSVCs does not completely overlap, as only the object is shared between the two verbs.

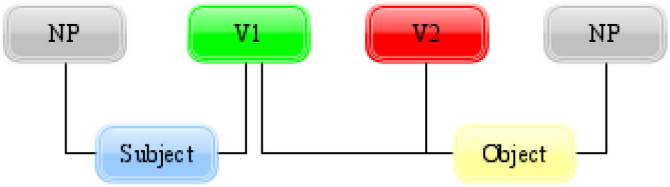


Figure 12: Partially overlapping argument structure of transitive manner V1 (green) and intransitive/unaccusative result-denoting V2 (red) in Oceanic Type-C-RSVCs (Object sharing).

There are some cases in which Type-B- and Type-C-RSVCs co-occur within the same language. In Samoan, for example, the result denoting PC-verb *mamā* may appear either in its causativzed transitive form (derived by the causative prefix *fa'a-*) or in its bare stative/unaccusative form (199).

(199) a. *Sā* ***solo*** ***fa'a-mamā*** *e* *Pita* *le* *laulau.* SAMOAN
PST wipe CAUS-clean ERG Peter SPEC table
'Peter (volitionally) wiped the table clean.'

b. *Sā* ***solo*** ***mamā*** *e* *Pita* *le* *laulau.*
PST wipe clean ERG Peter SPEC table
'Peter wiped the table clean.'

Notably, both constructions vary in their semantic interpretation as Type-B-RSVCs express a higher degree of volitionality in which the causing action is performed by the agent (also Frostad 2012 on Ughele). Moreover, Type-C-RSVCs are syntactically more restricted in that anticausative verbs like *pa'ū* 'fall' cannot appear in this construction.

(200) a. *Sā* ***ta*** ***fa'a-pa'ū*** *e* *Malia* *le* *la'au.* SAMOAN
PST cut CAUS-fall ERG Mary SPEC tree
'Mary chopped the tree down.'

b. * *Sā* ***ta*** ***pa'ū*** *e* *Malia* *le* *la'au.*
PST cut fall ERG Mary SPEC tree
'Mary chopped the tree down.'

However, this generalization does not hold true across Oceanic languages. In the Northern Vanuatu language Mwotlap, anticausative verbs actually can function as the V2 (François 2004). The nature of this variation has not been addressed yet.

(201) a. *Ni-yiy* *mi-**yiy*** ***si~sigoy*** *na-mtig.* MWOTLAP
ART-quake PRF-quake RED~fall ART-coconut
'The earthquake made the coconut trees fall down.'

b. *Na-lo* *ni-**hey*** ***sim~sim*** *n-aes.*
ART-sun AO-shine RED-melt ART-ice
'The sun melts the ice (by shining).' (François 2004: 119)

Type-C-RSVCs have been reported for languages like Niuean (Polynesian, Central-Eastern Oceanic; Massam 2013), Tongan (Polynesian, Central-Eastern Oceaic; Churchward 1953), Hoava (New Georgia; North-West Solomonic, Western Oceanic; Davis 2003), Tîrî (Osumi 1990) and Kubokota (Chambers 2009); see Figure 13 below.

4.2.4 Resultative compounds and manner/result affixes

In addition to RSVCs in which both predicates can function as independent verbs, several Oceanic languages exhibit constructions in which either the manner, the result or both predicates cannot occur as the independent predicate of a clause. This phenomenon has been sometimes referred to as classificatory prefixes, resultative suffixes or verbal compounds (e.g. Moyse-Faurie 2018, Bradshaw 2010b, Thieberger 2007). Although these patterns do not satisfy all criteria for SVCs, they clearly belong to the same phenomenon which is why I briefly discuss them here (cf. Naess 2012, Barbour 2012, Margetts 2005).

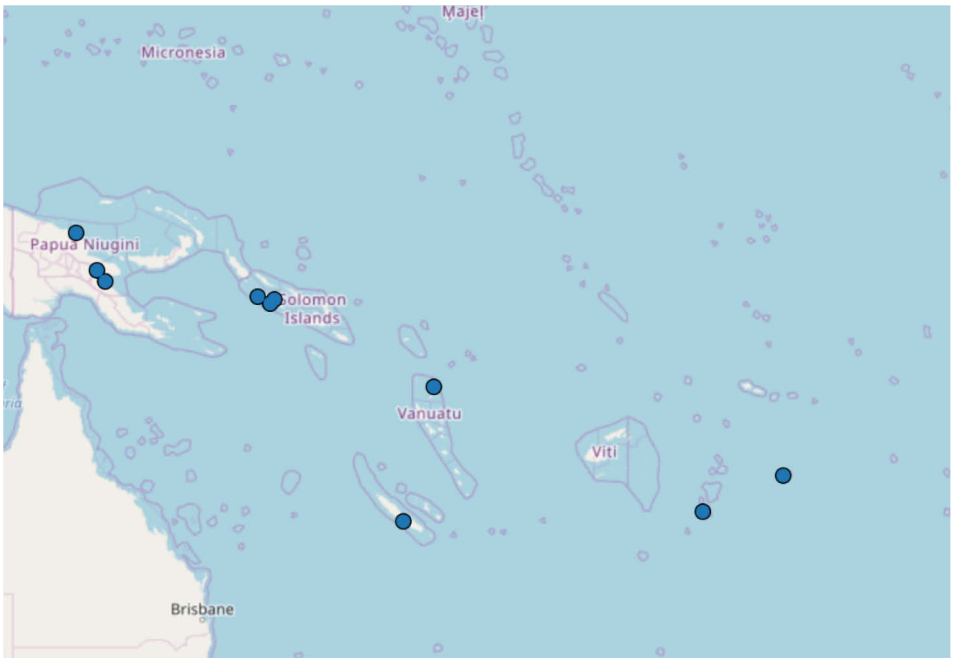


Figure 13: Distribution of Type-C-RSVCs in Oceanic languages.

Firstly, the manner V1 is not attested as an independent verb. In Tawala (Milne Bay; Papuan Tip, Western Oceanic), Ezard (1997) observes that some manner V1s are no longer able to occur as an independent verb. Instead, the manner V1 obligatorily combines result denoting verbs in an RSVC.

(202)	*hana-hedali*	bite-break	'to break (sth.) with teeth'	TAWALA
	tape-hedali	by.hand-break	'to break by hand'	
	tape-hoeya	by.hand-open	'to open it (by hand)'	(Ezard 1978: 1164/1169)

Therefore, this type of Type-A-RSVCs diverge from prototypical cases in that the manner root is necessarily bound to the causative V2. Similar processes have been described for other Oceanic languages of the Papuan Tip area, including Nimowa, Sudest and Iamalele (Ezard 1978), as well as Iduna (Bradshaw 1982), but also occur less frequently in other 'Melanesian' languages. Based on the bound status of the manner V1, Bradshaw (2010b) proposes a light verb analysis for Papuan Tip languages (cf. Aboh 2009 for a similar analysis of RSVCs in the Niger-Congo language Gungbe).

Secondly, the result-denoting V2 is not attested as an independent verb. This type of variation has also been described by the term resultative suffixes or asymmetrical verbal compounds (Thieberger 2006, Bradshaw 1982 among others) In Nafsan (South Efate; Southern Vanuatu, Southern Oceanic), Thieberger (2006) discusses an instance of Type-A-RSVCs in which the causative V2 only occurs in combination with manner verb.

(203) a.	*sak*	'to jump'	+	*-ktof*	'to break'	→	*kis-ktof*	'to jump-break'	NAFSAN
b.	*suf̃*	'to pierce'	+	*-fu*	'through'	→	*suf̃-fu*	'to pierce through'	
d.	*sok*	'to spear'	+	*-pun*	'kill'	→	*sok-pun*	'to spear to death'	

(Thieberger 2006: 230)

This observation is shared for many Western and Southern Oceanic languages in which causative verbs appear to require (or at least prefer) the specification of the manner of the causing action by a manner V1 (cf. Gast et al. 2014). Such a pattern has been also observed in Daakaka (von Prince 2015), Saliba/Logea (Margetts 1999), Nerverver (Malekula; Central Vanuatu, Southern Oceanic; Barbour 2012) and Levo (Epi; Central Vanuatu, Southern Oceanic; Early 1993) as well as Oceanic languages of the Papuan Tip area such as Nimowa, Sudest and Iamalele (Ezard 1978), as well as Iduna, Iwal, Numbani and Yabem (Bradshaw 1982).

Lastly, both manner V1 and result-denoting V2 are not attested as independent verbs. In Äiwoo (Reefs Santa Cruz, Temotu), Næss (2012) and Næss & Boerger (2008) describe verbal compounds in which both the manner and the result root cannot function as an independent verb. The list (204) below shows a series of roots from the domain of cut-and-break-verbs that are have been described to exhibit this restriction.

(204)	*ba-*	'hold both ends and push; prototypical breaking'	*-be*	'become soft as a result of impact'	ÄIWOO
	bu-	'push with sole of foot'	*-bi*	'crumple, bend out of shape'	
	eä-	'slice, cut into small pieces'	*-bu*	'break of soft crumbly objects'	
	lâ-/lä-	'chop'	*-gäsi*	'cleave'	
	nu-	'pinch, squeeze with fingers'	*-gulo*	'crack open'	
	po-	'kick'	*-ki*	'break, snap, of long rigid objects'	
	tâ-/tä-	'cut with sawing motion'	*-lu*	'break, snap, of long flexible objects'	
	to-	'strike with a single hard punch'	*-ngii*	'smash, shatter'	
	vä-	'hit with a long instrument'	*-si*	'chip'	
	wo-	'tap, hammer'	*-täli*	'tear, rip apart'	(Næss 2012: 405)

However, verbal compounds can still be classified as RSVCs as independent verbs can also appear in this construction (cf. Næss 2012). Cross-linguistically, this pattern is not only found in Reefs-Santa Cruz languages like Natügü (Næss & Boerger 2008), but also in New Caledonian languages such as Nemi (Ozanne-Rivierre & Revierre 2004) or Xârâcúú (Moyse-Faurie 2015). Although verbal compounds differ from Type-A-RSVCs in the verbhood of their parts, I interpret them as variation of the same abstract type based on the causative nature of the V2 and the absence of causative morphology.

4.2.5 The properties of single-marking RSVCs

The cross-linguistic survey of resultative expressions in 40 Oceanic languages shows that resultative meaning is typically realized by RSVCs (cf. Verkerk & Frostad 2013). However, Oceanic RSVCs are subject to variation with respect to the argument and event structure of the result denoting predicate as well as to the presence of causative morphology. Therefore, I have proposed a tripartite classification of single-marking RSVCs in Oceanic based on the morphosyntactic and semantic properties of the result-denoting V2.

In general, Oceanic RSVCs fall into two broad classes according to the event and argument structure of the result denoting predicate. Whereas Type-A- and Type-B-RSVCs as well as verbal compounds exhibit transitive causative V2s, Type-C-RSVCs exhibit intransitive stative or anticausative V2. Consequently, Type-C-RSVCs differ from the other types of RSVCs in terms argument sharing in that only the object argument is shared between the two predicates. This division seems to reflect the distinction between resultative secondary predication and the means construction as discussed in chapter 3. In addition, Oceanic RSVCs with causative V2 split into two subtypes according to the presence of causative morphology. On the one hand, Type-B-RSVCs the causative V2 is a morphological causative in which a stative PC or anticausative verb is causativized by a reflex of the Proto-Oceanic causative prefix **pa(ka)-*. On the other hand, the causative V2 is a lexical causative in Type-A-RSVCS and verbal compounds. Therefore, it seems that the presence of causative morphology is determined by the root class. Type-A-RSVCs can be further classified by the ability of its parts to function as independent predicates of a clause as either the manner, the causative or both predicates only occur in this construction. Although the bound nature of this resultative compounds contrasts with the compositional nature of other types of Oceanic RSVCs, they share the underlying event and argument structure properties which is why I group them with Type-A-RSVCs.

A single language may exhibit more than a single type of RSVCs indicating that the different types are not in complementary distribution. Since the data on RSVCs in most languages comes from grammar descriptions that do not necessarily mention every subtype that may be found, I hesitate to make any stronger claims about the distribution of the respective types in the Oceanic language family. However, the survey revealed some tendencies. On the one hand, Melanesian languages frequently exhibit Type-A-RSVCs and resultative compounds while this subtype has not been described for any Polynesian languages. On the other hand, Type-B- and Type-C-RSVCs have been reported for both Melanesian and Polynesian languages.

Interestingly, the basic word order of a language does not seem to affect the order of the predicates in Oceanic RSVCs as the manner predicate always precedes the result-denoting predicate in SVO, SOV and VSO languages across all subtypes. Such iconic word order has been frequently observed in the context of SVCs cross-linguistically (Aikhenvald 2018, Williams 2008, Veenstra & Muysken 2017, Durie 1997). Yet, Bradshaw (1982) reports a correlation between word order and the dependent verbhood of the respective predicates in the Oceanic languages of mainland PNG: While resultative prefixes are predominantly found in VO languages, manner prefixes typically occur in OV languages. Whether this tendency holds outside of mainland PNG

The properties of the different types of Oceanic RSVCs are summarized in Table 4. Due to the (micro-)variation found in the context of RSVCs, Oceanic languages present an ideal candidate to further explore the relation of manner and result in resultative constructions under a typological perspective. However, the nature of this morphosyntactic and semantic variation and its distribution is only barely understood as most Oceanic languages are fairly understudied in this respect. As the investigation of resultative constructions requires a careful examination of the event and argument structure properties not only of the complex predicate but also of its individual parts, this thesis addresses the distribution of causative morphology in Type-A- and Type-B-RSVCs in two case studies on the Melanesian language Daakaka and the Polynesian language Samoan.

	Type-A-RSVCs	**Type-B-RSVCs**	**Resultative Compounds**	**Type-C-RSVCs**
Independent predicates	Yes	Yes	No	Yes
Manner predicate	V1	V1	V1	V1
Result predicate	V2	V2	V2	V2
Argument/Event structure of V2	transitive/ causative	transitive/ causative	transitive/ causative	intr./ stative, anticausative
Argument sharing	subject, object	subject, object	subject, object	object
Causative morphology	No	Yes	No	No
Predicate order	M>R	M>R	M>R	M>R

Table 4: Morphosyntactic and semantic properties of different types of RSVCs in Oceanic

4.3 On the morphosyntactic status of multiple-marking RSVCs

Before I turn to the case studies on single-marking RSVCs in Daakaka and Samoan, I briefly discuss multiple-marking RSVCs which are commonly found to express resultative meaning in Oceanic languages in addition to single-marking RSVCs. In contrast to single-marking RSVCs, each verb is separately marked by a TMA marker in multiple marking RSVCs (Verkerk & Frostad 2013, Bril 2004, Crowley 2002, Bradshaw 1982).

(205) a. *Angela* ***mwe*** *kase* *t-shirt* ***ma*** *mesaa.* DAAKAKA
Angela 3SG.REAL wash t-shirt 3SG.REAL clean
'Angela washed the T-shirt clean.'

b. Bur **rro-**un-i **a-**myat. KAIRURU
pig 3PL-hit-3SG 3SG-die
'They killed the pig.' (Bradshaw 1982: 34)

c. *Inau* ***ni-****uasi* *vuasi* ***hee-****mate* PAAMESE
1SG 1SG.DIST:FUT-hit pig 3SG.DIST:FUT-die
'I will hit the pig to death.' (Crowley 2002: 58)

As seen in Type-C-RSVCs, the V1 specifies the manner of an action that leads to a result state denoted by the stative V2. This is shown for Daakaka in (206) where the stative verb 'be.clean' can appear as the result denoting V2, but not the causative verb 'clean (with hands)'. If the second verb is causative, the construction is interpreted as a coordination.

(206) a. *Angela* *ma* *kase* *tisot* *ente* *ma* *mesaa.* DAAKAKA
Angela REAL wash.TR. t-shirt DEM REAL clean.ITR
'Angela washed the T-shirt clean.'

b. # *Angela* *ma* *kase* *tisot* *ente* *ma* *go~kuo-ne.*
Angela REAL wash.TR t-shirt DEM REAL RED~wipe-TR
Intended: Angela washed the T-shirt clean.'
Instead: 'Angela washed the T-shirt and cleaned it (with her hands)'

Multiple-marking RSVCs have been reported in a wide-range of languages in the 'Melanesian' region. However, recent studies challenge the serializing status of these construction in Oceanic languages based on morphosyntactic, semantic and prosodic evidence. In particular, it has been argued that the V2 in multiple-marking SVCs is an syntactically reduced adjunct clause (Hopperdietzel & Klingler 2019, Cleary-Kemp 2015, von Prince 2019b, 2011b, see also Kalin & Keenan 2011 on TP-serialization in Malagasy).

4.3.1 TMA mismatches

A first concern deals with the values of TMA and polarity-markers in multiple-marking SVC construction. By the assumption that the core phenomenon of verb serialization describes the syntactic composition of two verbs below inflectional domain, distinct TMA values on both verbs are rather unexpected as such a pattern suggest that each verb exhibits its own inflectional projections (Zimmermann & Amaechi 2020, Cleary-Kemp 2015, Kalin & Keenan 2011, Stewart 2001, but see Aikhenvald 2018 for including such cases under the term "SVC"). This contrasts multiple exponence of the same TMA value as observed in other serializing languages such as Niger-Congo language Degema (Rolle 2020, Tyler & Kastner 2019, Rolle & Kari 2016). In the following, I first present the pattern of Degema before I contrast it with the Oceanic pattern as found in Daakaka.

In Degema, verbs are obligatorily marked by proclitics and enclitics. On the one hand, proclitics agree with the subject's phi-features and come in two sets whose distribution is determined by the tense and polarity of the clause (Rolle 2020, Rolle & Kari 2016) On the other hand, enclitics realize perfect and factive aspect. As Degema is an SVO language, the subject occurs before and the object after the verb.

(207) *Ohoso* ***o-sá-n*** *ēnám*. DEGEMA
Ohoso 3SG.SET2-shoot-FAC animal
'Ohoso shot an animal.' (Rolle 2020: 209)

Whereas 'heavy' disyllabic object pronouns appear in the same post-verbal position as full object DPs (208)a, 'light' monosyllabic object pronouns intervene between the verbal root and the enclitic (208)b.

(208) a. *Osoabo* *o=kótú=n* ***óyi***. DEGEMA
Osoabo 3SG.SET2=call=FAC 3SG.PRON
'Osoabo called him/her.'

b. *O=kótú* ***wó***=*n*.
3SG.SET2=call 2SG.PRON=FAC
'S/he called you.' (Rolle 2020: 210)

In the context of SVCs, Degema cliticization shows interacts with the phonological shape of the object. When the two verbs in an SVCs are not interrupted by a full object DP, proclitic attaches to the initial verb of the SVC while the enclitic to the last verb (209)a. Like in mono-verbal environments, 'light' pronouns occur within the boundaries of the verbal

complex in the position (209)b/c. The respective position of the 'light' pronoun, i.e. after the V1 (209)b or after the V2 (209)c, depends on whether it is the object of the respective verb (Kari 2003). This results in single-marking SVCs where both pro-clitic and enclitic are marked only once for the whole construction.

(209) a. *Ohoso* ***o=****tá* *dé=****n*** *isen.* DEGEMA
Ohoso 3SG.SET2=go buy=FAC fish
'Ohoso wend and bought fish.'

b. *Breno* ***o=****dúw* *mé* *tá=****ān***.
Breno 3SG.SET2=follow me go=FAC
'Breno went with me.' (Rolle 2020: 212)

c. *Breno* ***o=****sóm* *fíyé* *wó=****ōn***.
Breno 3SG.SET2=be.good be.more.than you=FAC
'Breno is handsomer than you.' (Kari 2003: 281)

In contrast, if full DPs objects and 'heavy' object pronouns occur in between the two verbs each verb must be marked by its own proclitics and enclitics separately (210). Crucially, both proclitics and enclitics are identical and give rise to multiple-marking SVCs.

(210) a. ***mi=****dúw****=n*** *óyi* ***mi=****tá****=ān*** DEGEMA
1SG.SET2=follow=FAC her/him 1SG.SET2=go=FAC
'I went with her/him.' (Rolle 2020: 211)

b. *Tatane* ***o=****sá****=n*** *ēnám* ***o=****gíyé****=ēn.***
Tatane 3SG.SET2=shoot=FAC animal 3SG.SET2=kill=FAC
'Tatane shot and killed the animal.' (Rolle 2020: 211)

Notably, Rolle (2020) describes multiple realization of proclitics and enclitics to be observed across all semantic types of SVCs without any evidence that the respective verbs differ in their morphosyntactic properties, e.g. the V2 is structurally more elaborated containing its own IP-projection that is associated with cliticization. Therefore, the major difference between single and multiple marking SVCs is the phonological shape of the object. Based on this observation, Tyler & Kastner (2019) argue that single- and multiple-marking SVCs in Degema do not vary with respect to their syntactic representation but follows from language specific morphophonological constraints at the syntax-prosody interface (cf. Rolle 2020 for a post-syntactic OT-analysis).

The properties of multiple-marking SVCs in Degema vary from the properties of multiple-marking patterns in many Oceanic languages. In Daakaka, for example, verbs

are obligatorily marked for mood by a preverbal TMA-marker that cliticisizes with the subject agreement marker (here: the third person plural marker *ya*) in realis mood (Hopperdietzel 2018, von Prince 2015).[43]

(211) *Ya-**m*** *te* *lee* *ente.* DAAKAKA
3PL-REAL cut.TR tree DEM
'They cut the tree.'

In multiple-marking SVCs, the V2 is obligatory marked by a second TMA marker (212)a. In contrast to Degema, this marking is not sensitive to the morphophonological shape of the object as the second TMA marker is realized even in the absence of an overt object DP/pronoun (212)b. If multiple marking in Daakaka would be governed by the same rules as in Degema, we would expect that the absence of an 'heavy' object, the mood marker on the V2 were omitted which contra to the case (212)c.

(212) a. ***Ya-m*** *te* *lee* *ente* ***ma*** *mwelili.* DAAKAKA
3PL-REAL cut.TR tree DEM REAL small
'They cut the tree small.'

b. ***Ya-m*** *te* ***ma*** *mwelili.* DAAKAKA
3PL-REAL cut.TR REAL small
'They cut it small.'

c. # ***Ya-m*** *te* *lee* *mwelili.*
3PL-REAL cut.TR tree small
Intended: 'They cut it small.'
Instead: 'They cut small trees.'

In addition, Daakaka multiple-marking SVCs differ from Degema SVCs in that the respective mood markers do not need to be identical (von Prince 2015, 2011b). Instead, the two mood markers can differ with respect to their mood value which determines the semantic interpretation of construction. This is illustrated by the RSVC in (213) below. Here, the complex manner V1 *pyaos vyan* ('row') is marked by the realis marker *mwe* whereas the result denoting V2 *tumtum-ane* 'be right at' is marked by the potentialis marker *we*. The potentialis marking on the result-denoting V2 indicates that the agent "has not yet arrived at his destination" (von Prince 2015: 318).

[43] Note that Daakaka is a *pro*-drop language in which subject and object arguments are frequently dropped in the discourse. In the following examples, the subject marker on the verb is not a clitic subject pronoun but a subject agreement marker that realizes the phi-features of the (dropped) subject on the mood marker (Hopperdietzel 2018).

(213) ***Mwe*** *pyaos* *vyan* ***we*** *tumtum-ane* *ar* *an* *[…].* DAAKAKA
REAL row go POT be.right-TR place DEF
'He rowed straight to the place […]' (von Prince 2015: 318)

If both verbs would be marked by the realis marker, the interpretation would be that the agent arrived at his destination (cf. multiple realis-marking in example (49) were the result state 'small' is understood as already accomplished by the agent's action.[44]

Furthermore, the distribution of single- and multiple marking SVCs is determined by the semantics relation the two verbs. For example, directional SVCs are realized by single-marking SVCs (214)a while adverbial manner SVCs are realized by multiple-marking SVCs (214)b (von Prince 2019b, 2015).[45]

(214) a. *Tomo* *mwe* *tow-ane* *wotop* ***vyan***. DAAKAKA
rat REAL throw-TR breadfruit go
'The rat throw the bread fruit down.' (von Prince 2015: 324=

b. *Ka* *si-p* *sesivi* *mesyu* *ente* ***wa*** ***maga***.
ASR 3PC-POT skin fish DEM POT quick
'We will scale this fish quickly.' (von Prince 2019: 2)

[44] Moreover, the two verbs can also disagree in their polarity values. In (i), the negation is expressed by the negative realis marker on the V2 while the V1 is in realis mood. This structure results in a narrow scope interpretation of the negation in that only the result state is negated.
(i) ***Mwe*** *te* *lee* ***to*** *i* *apyalo* *ten,* *mwe* *te* *mw=i* *bwye.* DAAKAKA
REAL cut wood REAL:NEG COP boat native REAL cut REAL=COP slit.drum
'He carved the wood not to become a canoe, but to become a slit drum.' (von Prince 2015: 320)
In addition, negation can also be marked on the V1 only. Here, the negation prefers a wide scope interpretation including both the event and its result.
(ii) ***To*** *te* *lee* ***w=i*** *apyalo* *ten,* *mwe* *te* *mw=i* *bwye.* DAAKAKA
REAL:NEG cut wood POT=COP boat native REAL cut REAL=COP slit.drum
'He did not carved the wood to become a canoe, but to become a slit drum.' (von Prince 2015: 320)
The crucial observation is that if the V1-TMA-value expresses negative polarity, the V2-TMA-value must be in potential or necessity mood. This restriction arises from the semantics of the respective TMA markers: The realis marker describes eventualities that take or took place in the actual world. Therefore, a negation of the initial event of a causal chain as in (ii) implies that the result state was never reached which makes the use of the realis marker ungrammatical. Instead, the potentialis marker shows up on the V2 (cf. von Prince 2011a, von Prince et al. 2018).

[45] Note that a restricted set of stative PC-verbs can either occur as the V2 in a multiple-marking SVC in clause-final position or as the V1 of a single-marking SVC. While this variation does not seem to have interpretative effects, von Prince (2019b) argues that the two constructions differ in their underlying syntactic derivation in that the V2 in single-marking constructions attach syntactically lower than in multiple marking constructions (see also chapter 8 for a additional discussion).

Interestingly, multiple marking SVCs have been primarily described for contexts that can be related to modification, namely aspectual, manner, depictive and resultatives.[46] Therefore, Daakaka differs from Degema in that multiple marking SVCs are sensitive to syntactic and semantic properties.

Based on this observation, von Prince (2019b, 2015, 2011b) argues that multiple-marking SVCs do not belong to the core phenomenon of verb serialization but are instances of adjoined structurally reduced clause-sized adjuncts to the matrix verb (see Cleary-Kemp 2015 who arrives at the same conclusion for multiple-marking SVCs in the Oceanic language Koro). Therefore, each verb in a multiple marking SVC in Oceanic projects its own IP which can realize different TMA values (which is nevertheless dependent on the value of the V1; von Prince 2015, Cleary-Kemp 2015, Crowley 2002, cf. Kalin & Keenan 2011 on TP-serialization in Malagasy).[47]

4.3.2 On the prosodic integration of multiple-marking RSVCs – A pilot study

Tentative support for the clausal status of the V2 in multiple-marking comes from the preliminary results of a pilot study on the prosodic integration of single and multiple marking SVCs in Daakaka.[48] Since Givón (1991), most definitions of SVCs make reference to the generalization that SVCs are pronounced under a single intonation contour (Aikhenvald 2018, Veenstra & Muysken 2017, Haspelmath 2016 and others) – though, language specific descriptions are usually not supported by phonetic analyses (Lovestrand 2018, Nordlinger 2014, Crowley 2002). In his seminal study, Givón (1991) investigated the prosody of SVCs in four Papuan languages (Kalam, Alambak, Tairora and Chuave) and the Oceanic Creole language Tok Pisin focusing on intonational breaks indicated by pauses in between various syntactic constituents of an utterance. In particular, he focused

[46] Given the discussion of resultatives in chapter 3, the grouping result-state denoting constituents other types of adverbial modification seems to unexpected as this type of resultatives has been excluded in the discussion. However, *spurious* resultatives in which the result state is realized by an adverb are also familiar from non-serializing languages such as English (e.g. *Peter cut the meat thinly*; Washio 1997). Multiple-marking resultatives in Daakaka might be related to this type of resultatives.

[47] The intuition that the adjoined V2 is a structurally reduced IP comes from the observation that the V2 does agree exhibit subject agreement (von Prince 2015, Cleary-Kemp 2015 on Koro). In (i), for example, the result denoting V2 does not agree with either the subject or the object of the clause which both denote plural entities. Instead, the realis marker occurs in its bare form. As the subject marker can be shown to reside on T(ense) directly above the Mood marker, this observation suggests that the V2 in multiple-marking SVCs lack as tense projection (Hopperdietzel 2017).

(i) *Vyaven nyoo ente* ***ya-m*** *kase tisot nyoo ente* ***ma*** *mesaa.* DAAKAKA
women PL DEM 3PL-REAL wash T-shirt PL DEM REAL clean
'The women washed the T-shirts clean.'

[48] This section is based on joint work with Nicola Klingler (Österreichische Akademie der Wissenschaft, Wien) who is responsible for the phonetic analysis (cf. Hopperdietzel & Klingler 2019).

on pauses preceding serialized verbs (e.g. in between *putum finis*), non-serialized lexeme (e.g. *em putim*) and (silently or overtly) conjoined clause (e.g. *pinis na*).

(215) *Em* ***put-im*** ***pinis,*** *(na)* *em* *kism* *tamiok* TOK PISIN
3SG put-TR finish COORD 3SG get axe
'He dropped it down, then he gets the/an axe.' (Givón1991: 90)

His results show that the probability of an intonational break (i.e. a pause) in between two verbs of an SVC is not only considerably lower than in between two (conjoined) clause but also lower than in between two non-serialized lexemes, as shown Figure 14. Interestingly these findings were consistent across all studied languages as well as across semantic and syntactic subtypes (e.g. single and multiple marking).

Language/ text	Pause probability		
	Serial verb clauses	Mid-clause lexical	Range for various main-clause types
Tok Pisin			
on-line	2.0%	30.0%	67.6–87.5%
post-view	6.4%	30.1%	58.9–71.0%
Tairora			
on-line	1.2%	13.6%	35.9–74.7%
post-view	5.3%	13.9%	40.2–51.5%
Kalam			
on-line	4.4%	10.9%	23.4–32.1–81.3%
post-view	5.4%	6.8%	48.9–60.4–71.4%

Figure 14: Probability of intonational breaks (pauses) in between two elements in between two serialized verbs (left column), in between two lexical elements within a single clause (middle column) and in between two coordinated clauses(right column; Givón 1991: 25).

While Givón's (1991) original study utilizes pauses, other studies have focused on abrupt changes in pitch as indicators of intonational breaks (e.g. Gramatke 2019 on Kriol Seselwa, Bradshaw 1993 on the Oceanic language Numbami). The general intuition behind this diagnostic is that if SVCs are monoclausal constructions, they should be part of a monoclausal intonational phrase. Therefore, prosodic cues that indicate clause boundaries should not occur in between two verbs of an SVC. In the following, I present the preliminary results of a pilot study on single and multiple marking SVCs in Daakaka that suggest that multiple-marking SVCs may be re-interpreted as bi-clausal constructions.

4.3.2.1 *Prosody in Daakaka*

Regarding its prosodic features, it is significant to note that Daakaka lacks lexical stress according to the parameters of duration, (fundamental) frequency and intensity (von Prince 2015: 34ff). Yet, Daakaka exhibits boundary tones that correspond to the syntactic unit of a clause (TP or CP). In utterance-medial position these boundary tones are characterized by a pitch rise, while in utterance-final position pitch contour lowers (or stays the same). This is demonstrated in (216) where the topic *Kuli yene* precedes the subordinated clause *kate esi puskat* which is followed by the matrix clause *te ka mas óte puskat.*

(216) *[Kuli yene] [ka te esi puskat] [te ka we mas óte puskat.]*
dog now SUBORD DIST see cat CONJ ASR POT must hunt cat
'Now, whenever the dog sees the cat, it will hunt the cat.' (von Prince 2015: 36)

The phonetic analysis of this sentence reveals a high boundary tone after the topic as well as a high boundary tone in utterance-medial position before the conjunction *te* and a final low boundary tone in utterance-final position. The pitch rises are always on the final syllable of the intonational phrase (IP). Therefore, high IP boundary tones indicate match with clausal boundaries which gives rise to a hat shaped intonation contour of a simple clause (von Prince 2015: 35).

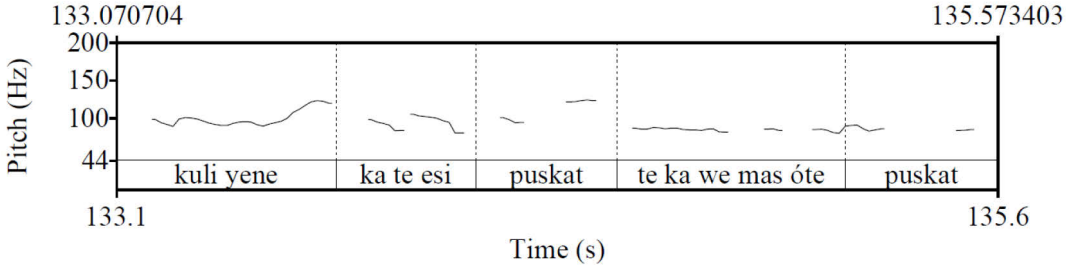


Figure 15: A typical intonation contour with two non-final boundary tones (on yene *and* puskat*) and one final boundary tone (on the second* puskat*; von Prince 2015: 37).*

In the context of SVCs, this pattern predicts that boundary tones should not be observed in single-marking SVCs (217)a. If boundary tones are found in multiple-marking, this would provide evidence for a bi-clausal analysis as proposed in the last section (217)b.[49]

[49] Note that this hypothesis predicts that high boundary tones also occur in clause-final position before subordinated clauses. This prediction needs to be checked during the ongoing phonetic analysis against a larger set of data. Given the preliminary status of the present study, such results cannot be provided yet.

(217) a. *Ma ta wu~wuo (nge).* DAAKAKA
REAL cut.ITR RED~open 3SG.PRON
'He cuts it open.'

b. ***Ya=m*** *te lee* ***ma*** *mwelili.*
3PL=REAL cut.TR tree REAL be.small
'They cut the tree small.'

4.3.2.2 Methodology

The recordings were conducted on the island of Ambrym (Vanuatu) in the participants' homes or in the quietest surroundings available. Since the primary goals of these recordings were syntactic and typological studies, the database is not phonetically controlled. However, we have tried to balance not only the conditions (single marked SVC, multiple marked SVC, and coordination), but also the age and the gender of the speakers. The participants (7m/5f, age: >20) are native speakers of Daakaka (L2: Bislama and various local neighboring languages), were born and raised in the village. During the recording sessions, the speakers were instructed to listen to a story in Bislama, spoken by the experimenter, and then asked to repeat the story in Daakaka (cf. storyboard elicitations; Burton & Matthewson 2015). The semi-spontaneous data was then analyzed using PRAAT (version: 6.0.24; Boersma & Weenink 2014). In pre-analysis, the Hertz-range and voicing thresholds were adjusted as needed, and the data was segmented on clause, word, and phoneme level. As the aim was to test the integration of verbal structures in intonation units, the pitch contours of 12 utterances were examined and the expected syntactic clause boundaries mapped with pitch movements.

4.3.2.3 Results

In the control condition (coordination), von Prince's (2015) observation that boundary tones occur on IP boundaries that correspond to the syntactic size of clauses was replicated as shown in the examples below (before #te# 'and, then'). For single-marking SVCs, the sole TMA marker bears the only pitch rise with no boundary tone between the V1 and V2. This is illustrated in Figure 16 were a single utterance medial boundary occurs in the expected clause-final position right before the conjunction #te#. This can be seen by the pitch rise on the last syllable of the preceding clause #wuo# 'to open'.

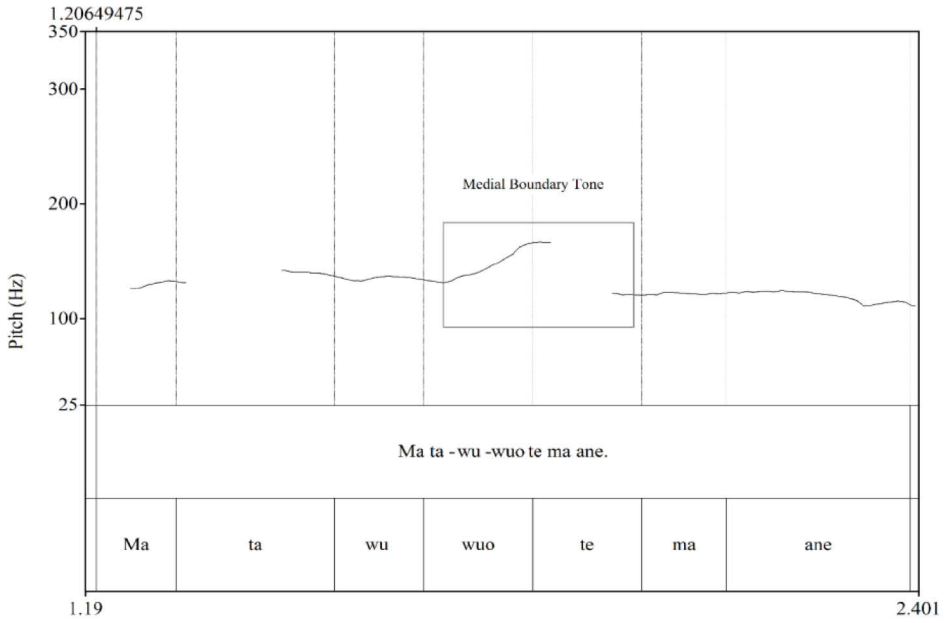


Figure 16: Pitch contour of single marking SVCs. Boxes indicate pitch rises that are interpreted as boundary tones.

Regarding multiple-marking SVCs, there is a tendency for every TMA marker to be aligned with a pitch rise: In three out of six cases, a high boundary tone was found at the position before the second tense marker (Figure 17). This is the predicted position if the two verbs in a multiple-marking SVC instantiate their own IPs. In two cases, a boundary tone was not found before the second TMA marker, and one case remains unclear.

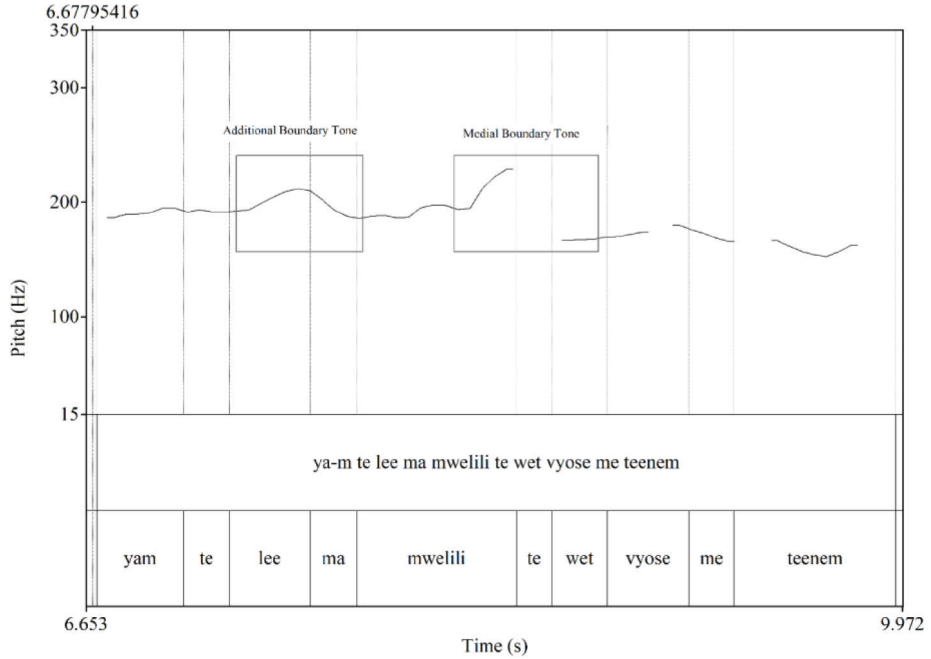


Figure 17: Pitch contour of multiple-marking SVCs. Boxes indicate pitch rises that are interpreted a boundary tones.

Note that such variation is not uncommon in phonetic analyses, as highlighted by Himmelmann (2019). Given the small set of data and its limited audio-quality used in this pilot study, these findings are still prelimary and need to be replicated by larger study with more controlled settings. However, the fact that boundary tones were only found in multiple-marking contexts suggest an effect of the construction type.

4.3.2.4 Discussion

The findings of the phonetic analysis of single marking (R)SVCs tentatively support the general claim that SVCs fall under a single intonation contour. There was no case where a boundary tone was observed between the two verbs which indicates a tight prosodic and morphosyntactic integration of the two verbs. In particular, the findings suggest that both verbs occur in a monoclausal environment. The exact size of the two verbs in Daakaka will be subject to the case-study in chapter 8. In contrast, multiple-marking SVCs show a slight tendency to exhibit a separate IPs for each TMA-marked verb in RSVCs as utterance medial (high) boundary tones can be observed in between the two verbs in the expected position right before the second TMA marker. Under the assumption that boundary tones match clause-size constituents (TP/IP), the results seem to question the monoclausal structure of multiple-marking SVCs in Daakaka. Instead, they provide independent support for a biclausal analysis of multiple marking SVCs in Daakaka as proposed by the morphosyntactic and semantic analysis in section 4.3.1.[50]

In sum, both the morphosyntactic and phonetic evidence suggests that multiple-marking SVCs in Oceanic are (most likely) not part of the core-phenomena of verb serialization in the sense that they combine morphosyntactic structure up to the inflectional domain (e.g. TP/MoodP/AspP). Instead, this type of complex predication seems to be more closely related to bi-clausal constructions such as clause union, restructuring or adverbial clauses (as proposed by von Prince 2015, 2019b, 2011b, Cleary-Kemp 2015). Due to their unclear morphosyntactic status, multiple-marking RSVCs are excluded from the discussion of RSVCs in this thesis.

[50] Since the boundary tone only occurs in half of the examined cases, an alternative interpretation would be that only the multiple-marking constructions that lack a boundary tone are true SVCs while the multiple-marking construction with boundary tones are bi-clausal construction (see Bradshaw 1993 for an analysis along these line in Numbami). One possibility to control for this difference is to manipulate the value of the secondary TMA marker. As noted by von Prince (2015), the potential mood marker requires the presence of the assertive marker *ka* in declarative clauses (216) but not in the second position of an SVC (213). Therefore, if a boundary tone occurs before a V2 that is marked by the potential marker, it cannot be a case of covert conjunction. This diagnostic will be implemented in the ongoing study.

4.4 Summary

In this section, I have provided an overview of resultative constructions in Oceanic languages. Based on a survey of 40 Oceanic languages, I have shown that resultative meaning is primarily expressed by RSVCs. Excluding multiple-marking RSVCs from the core phenomenon of verb serialization on the morphosyntactic and prosodic grounds, Oceanic single-marking RSVCs exhibit two basic pattern with respect to the argument and event structure properties of the result denoting predicate, namely transitive causative predicates, and intransitive stative or anticausative predicates. These findings seem to resemble the two types of resultative constructions, i.e. resultative secondary predication, and the means constructions, as introduced in chapter 3. Although the general pattern is well-established in most subgroups of the Oceanic language family, especially causative result denoting predicates have been observed to be subject to (micro-)variation with respect to the presence or absence of causative morphology (Type-A vs. Type-B-RSVCs) or the dependent nature of the manner and result predicate (verbal compounds). However, the underlying morphosyntactic and semantic properties of RSVCs and their variation across Oceanic languages is only barely understood (but see Verkerk & Frostad 2013, Bradshaw 1982 for comparative studies on Oceanic RSVCs).

In the following two part of this thesis, I will address the (micro-)variation found in Oceanic RSVCs with a focus on resultative constructions with causative predicates. As the investigation of RSVCs require a careful examination of the morphosyntactic and semantic properties of verbal predicates in each language, I conduct two case studies on Daakaka and Samoan, each language representing a different type of RSVCs. While Daakaka exhibits Type-A-RSVCs and resultative suffixes but does not have Type-B-RSVCs, Samoan has been described to make use of Type-B-RSVCs only. The choice to focus on the RSVCs two Oceanic languages only is partly motivated by the understudied nature of most Oceanic languages which does not allow for strong conclusion on the underlying morphosyntactic structure of the language. Moreover, due to the parallel investigation of the two types of constructions, the case studies provide a controlled setting for cross-linguistic comparison of resultative structures in the two languages which may inform the study of resultative construction in other Oceanic languages as well.

Part II: Case Study on Samoan

Chapter 5: The internal structure of Samoan predicates

In the following two chapters, I lay out a case study on the morphosyntactic and semantic properties of Type-B-RSVCs in the Polynesian language Samoan. In this type of resulatives, an intransitive or transitive V1 denotes the manner of an action while the result state is expressed by the morphological causative verb, derived by the causative prefix *fa'a-* (Mosel 2004).

(218) a. *Sā* ***lamu*** ***fa'a-malū*** *e* *le* *tama* *mea* *'ai.* SAMOAN
GEN chew CAUS-soft ERG SPEC boy thing eat.ABS
'He chews the food soft.' (Mosel & So'o 2000: 62)

b. *Sā* ***tipi*** ***fa'a-pa'ū*** *e* *Pita* *le* *la'au.*
PST cut CAUS-fall ERG Peter SPEC tree.ABS
'Peter fell the tree by cutting it.'

c. *Sā* ***pese*** ***fa'a-moe~moe*** *e* *Malia* *le* *pepe.*
PST sing CAUS-RED~sleep ERG Maria SPEC baby.ABS
'Maria put the girl to sleep by singing.'

As the investigation of resultatives requires a careful examination of the predicates that can appear in such constructions, this chapter focuses on the morphosyntactic and semantic properties of manner and result verbs outside of Type-B-RSVCs.

After a brief typological classification, section 5.2. provides an overview of some aspects of Samoan morphosyntax that will become relevant in the analysis of the Type-B-RSVCs in chapter 6. This includes the status of lexical categories, the interaction of nominal licensing and argument structure, as well as verb-initial syntax. In section 5.3, I analyze the morphosyntactic structure of *fa'a*-causatives, which function as result-denoting predicates in Type-B-RSVCs. Applying the diagnostics of Harley (2017) and Pylkkänen (2008), I demonstrate that *fa'a-* takes pre-categorized complements with a size up to VoiceP. In section 5.4, I investigate the lexical semantics of Samoan verbs with a focus on the distribution of manner and result meaning components, as outlined in chapter 2. This study reveals that Samoan appears to lack (monomorphemic) causative result verbs, but exhibits a class of causative manner verbs that entail an underspecified result state (cf. Alexiadou et al. 2017, Anagnostopoulou 2017, Embick 2009). Therefore, only derived causative verbs such as *fa'a*-causatives specify the result state in causative predication.

5.1 Typological overview

Samoan (also *Gagana Sāmoa*) is spoken by approximately 415,720 speakers – which makes it the second largest Oceanic language behind Fijian (670,710 speakers; Ethnologue 2019b). With around 169,000 speakers living on the islands of Samoa and American Samoa, as shown in Figure 18, (Ethnologue 2019c), actually more than half of the Samoan speakers live abroad. Significant speaker populations are found in New Zealand, the USA (especially Hawai'i and California) and Australia (Muāgututi'a 2018, Statistics 2014, Census Bureau 2015). Samoan is the national language of the independent state of Samoa (formerly known as Western Samoa) and it is currently not categorized as vulnerable or endangered by the UNESCO (Mayron 2019, Moseley 2010). However, recent studies notice a shift away from Samoan to English in both diaspora and American Samoa (Alofaituli 2011, Wilson 2010, Hunkin-Finau 2006, Lesā 2009). Especially, heritage speakers of Samoan may be strongly influenced by English (Muāgututi'a 2018).

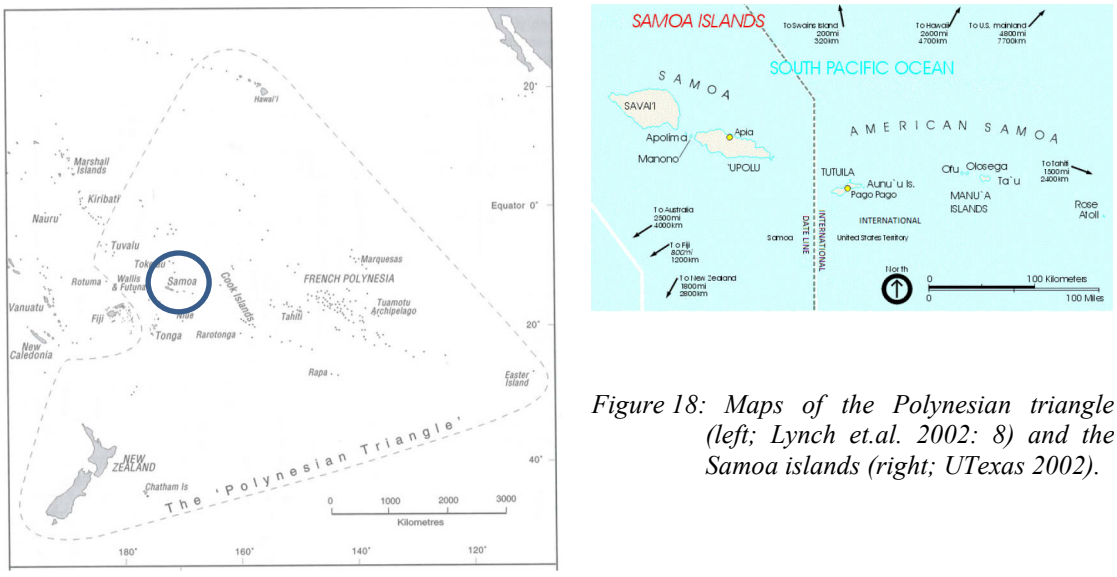


Figure 18: Maps of the Polynesian triangle (left; Lynch et.al. 2002: 8) and the Samoa islands (right; UTexas 2002).

Within the Oceanic language family, Samoan belongs to the Polynesian branch that covers the Central and Eastern Pacific from New Zealand to Hawai'i ('Polynesian triangle'; cf. section 4.1 on the internal grouping of the Oceanic language family). Thus, Samoan is closely related to other languages in the region such as Hawai'ian, Tongan, Niuean or Maori (Lynch et al. 2002, Biggs 1971, Pawley 1966, Clark 1969). Standard reference work on Samoan includes an extensive grammar (Mosel & Hovdhaugen 1992, see also Marsack 1975, Downs 1949, Churchward 1926), dictionaries (Ma'ia'i 2010, Milner 1966, Pratt 1878) as well as course books by Mosel & So'o (2000) and Hunkin (1992).

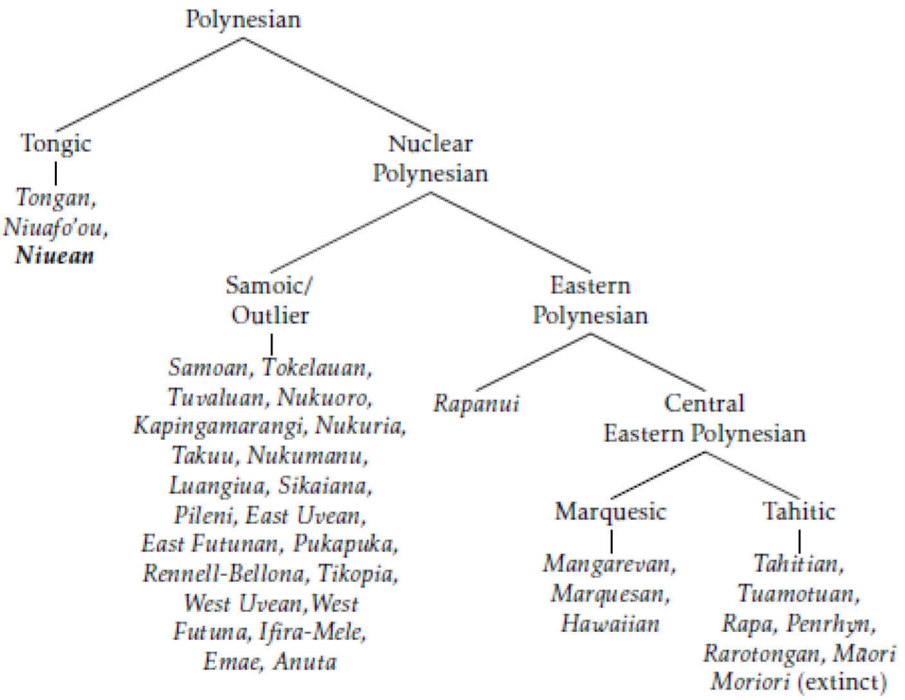


Figure 19: The Polynesian language group (Clemens 2014: 19).

With a small tradition of linguistic research, Samoan is quite well-described compared to many other Oceanic languages. To mention only a few, relevant studies comprise especially morphosyntactic (Collins to appear, 2017, Tollan 2018, Don & van Lier 2013, Koopman 2012, Donohue & Donohue 2010, Homer 2009, Mosel 2004, Cook 1996, Chung 1978, 1972, Clark 1969, Pawley 1966), but also semantic (Hohaus to appear, 2016, 2015, Hohaus & Howell 2015, Mosel 2000), phonological (Yu to appear, 2011, Yu & Stabler 2017, Calhoun et al. 2019, Calhoun 2017, 2015, Zuraw et al. 2014, Alderete & Bradshaw 2013) and sociolinguistic topics (Muāgututi'a 2018, Lesā 2009, Mayer 2001). Unless otherwise indicated, the data presented in this chapter comes from original field work with Samoan native speakers in Honolulu, HI, recorded in April and May 2019 with subsequent Skype sessions with individual speakers (cf. section 1.2 for a more detailed description of data collection).

5.2 Grammar sketch

This section presents an overview of certain aspects of Samoan morphosyntax, that will serve as a background for this case study's investigation of argument and event structure of Samoan predicates. Firstly, I discuss the status of lexical categories, with a focus on PC lexemes in section 5.2.1. As Samoan exhibit a rather small inventory of derivational morphology, the determination of the lexical categories of PC roots is challenging, as PC

roots may have verbal, nominal, adjectival or adverbial function in the absence of any morphological reflex (Don & van Lier 2013, Mosel 2004, Mosel & Hovdhaugen 1992). Based on morphological and semantic evidence, I suggest that Samoan PC lexemes fall into, at least, two basic classes – verbal or nominal PC lexemes (cf. Chung 2012 on the Austronesian language Chamarro).

In section 5.2.2, I take a closer look at the argument structure of verbal predicates in Samoan, with a focus on the nominal licensing and morphological case. Thereby, I show that Samoan is a syntactic ergative language that, in the context of transitive verbs, exhibits two splits in the case alignment of nominal predicates. On the one hand, Samoan shows an instance of differential object marking (DOM), which is related to the morpho-syntactic size of the internal argument, i.e pseudo noun incorporation (PNI). On the other hand, one particular verb class, so-called *middles*, that obligatorily assign oblique case to their internal argument (Collins to appear, Tollan 2018, Mosel & Hovdhaugen 1992, see Chung 1978 for an overview on Polynesian 'middles'). Adopting a prepositional approach to syntactic ergative languages (cf. Polinsky 2016), I propose a novel account of Samoan split-ergativity, in which I argue that the respective case patterns arise in the absence of a secondary licensing feature on Voice.

Lastly, in section 5.2.3, I briefly address Samoan verb-initial (VSO) word order, which is derived by phrasal movement of the VP to a head in the inflectional domain of the clause (Collins 2017). To account for clause final argument stranding, I adopt an analysis by van Urk (2019a) in which non-verbal constituents are spelled-out in their base-generated position (cf. distributed deletion; Fanselow & Cavar 2001).

5.2.1 Lexical Categories

As with many other Oceanic, and especially Polynesian, languages, Samoan exhibits a comparably small inventory of category-defining or category-changing morphology (Levin & Polinsky 2019, François 2017, van Lier 2017, 2016, Völkel 2017, Don & van Lier 2013, Massam 2005, Mosel 2004, Evans 2003, Broschart 1997, Churchward 1926, cf. also Nuger 2016, Chung 2012). Therefore, roots can appear in predicative, nominal, attributive or adverbial function without any overt morphology indicating their lexical category (Mosel 2004, 2000, Mosel & Hovdhaugen 1992, Milner 1966). This is exemplified by the PC-root *lelei* ‘good’ whose function can be determined by its syntactic environment (Mosel & Hovdhaugen 1992): (i) if the root is directly preceded by a T/A marker, its function is verbal (219)a, (ii) if it is preceded by an article, demonstrative, case marker

or other nominal morphology, its function is nominal (219)b, (iii) if it is preceded by a noun, its function is attributive/adjectival (219)c, and (iv) if it is preceded by a verb, its function is adverbial (219)d.

(219) a. ***E*** ***lelei*** *'oe?* PREDICATIVE
GENR good 2SG.ABS
'Are you good.' (Mosel & Hovdhaugen 1992: 43)

b. *E* *ese* ***le*** ***lelei*** *o* *l=a=u* *tunu* *ia* *[...]* NOMINAL
GENR different SPEC good POSS SPEC=POSS=2SG roast fish.ABS
'Your roasting of fish is excellent.' (lit: The being good of your fish roasting is extraordinary.' (Mosel & Hovdhaugen 1992: 563)

c. *'o* *le* ***mea*** ***lelei*** ATTRIBUTIVE
PRES SPEC thing good
'The good thing.' (Mosel & Hovdhaugen 1992: 74)

d. *E* ***susulu*** ***lelei*** *ai* *le* *lā* ADVERBIAL
GENR shine good ANAPH SPEC sun.ABS
'The sun shines nicely.' (Mosel 2004: 278)

While this pattern supports the assumption that roots are underspecified with respect to their lexical category, the absence of overt derivational morphology in most contexts complicates the determination of Samoan word classes. However, morphological, phonological and semantic evidence suggests that Samoan word formation is underlying still contains an underlying complexity.

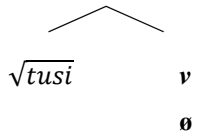
5.2.1.1 The absence of derivational morphology as zero categorization

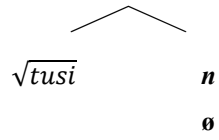
Consider, for example, the following word forms which are derived from the root $\sqrt{tusi}$; some involving the nominalizer *-ga* (Don & van Lier 2013, Mosel & Hovdhaugen 1992).

(220) a. *tusi* '(to) write' b. *tusi* '(the) letter'
c. *tusi-ga* '(the) writings, draft' d. *tūsi-ga* '(the) registration of marriage'
(Mosel & Hovdhaugen 1992: 82, 196)

In (220)a, the verb $tusi_{V}$ denotes a 'writing action' while the homophonous noun $tusi_{N}$ '(the) letter' denotes a letter, i.e. 'a special type of writing' (220)b. The idiosyncratic relation of nominal and verbal meaning suggests that the lexems are not derived from each other. Instead, the root $\sqrt{tusi}$ merges directly with the respective categorizers which are not expressed by overt morphology (Arad 2005, Marantz 2001, Kiparsky 1997).

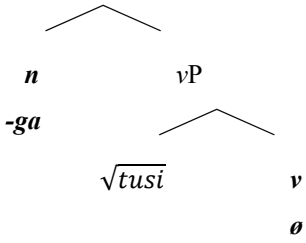
(221) a. *v*P → '(to) write' b. *n*P → '(the) letter'

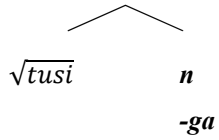




In contrast, the noun *tusi-ga*$_N$ '(the) writings' is derived by the nominalizer *-ga* and refers to the outcome of a writing action. Therefore, *tusiga* shows characteristics of deverbal event nouns, which suggests that the nominalizer *-ga* merges on top of an event-introducing verbalizing head (222)a (cf. Borer 2013, Bruening 2013, Alexiadou 2001, Grimshaw 1990). However, deverbalization is not the sole function of *-ga* as it also derives idiosyncratic result nouns like *tūsi-ga* '(the) registration of marriage'. The idiosyncratic meaning of the root and the additional lengthening of the root initial vowel indicates that the root merges directly with a nominalizer (Newell 2008, Arad 2005, Marantz 2001).

(222) a. *n*P → '(the) writings' b. *n*P → 'registration of marriage'





Consequently, root-categorization in Samoan can be overtly realized or silent. In addition, the distribution of the nominalizer *-ga* suggests that categorizing morphology in Samoan does not seem to be sensitive to the bases it attaches to – for example, root-categorization vs. category-changing (see Medeiros 2020 on the Hawai'ian nominalizer *-na*). Crucially, nominalized roots can be further verbalized without overt derivational morphology. In (223), the result noun *to-gā* 'plantation', which is derived from $\sqrt{to}$ 'plant', is used predicatively as denominal stative verb.

(223) *'ua to-**gā**-niu 'ātoa le mea maupu'epu'e.*
INCH plant-NMLZ-cononut whole SPEC place hill
'The whole hill was now a coconut plantation.' (Mosel 2004: 267)

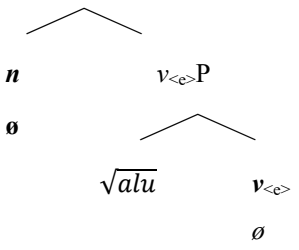
Likewise, the root *alu* 'go' forms zero-derived event nouns, as indicated by the availability of the underlying external argument *le pasi* 'the bus' (Alexiadou 2001, Grimshaw 1990). Therefore, the noun *alu* can be analyzed as a deverbal noun that is derived from the verb *alu* in the absence of nominalizing morphology.

(224) a. *E* ***alu*** *le* *pasi* *i* *Apia.*
GENR go SPEC bus.ABS OBL Apia
'The bus goes to Apia.'

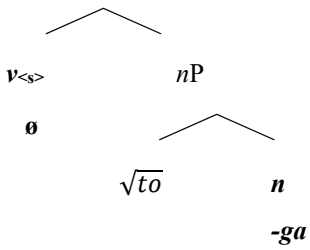
b. *Le* ***alu*** *o* *le* *pasi* *i* *Apia.*
SPEC go POSS SPEC bus.ABS OBL Apia
'The going of the bus to Apia.' (Mosel & Hovdhaugen 1992: 77)

The zero-derived deverbal and denominal word forms indicate that Samoan word-formation does not only exhibit zero-root categorization, but also zero-derivation that changes the category of an already categorized root (225).

(225) a.



b.



5.2.1.2 On the category of property-concept lexemes

The phenomenon of derivational zeros is also found in PC domain as roots appear in a predicative, nominal, attributive and adverbial function without category-defining morphology, as shown in (226) (Mosel 2004, Mosel & Hovdhaugen 1992, Milner 1966).

(226)

		attributive	**predicative**	**nominal**
a.	$\sqrt{lelei}$ 'good'	'good'	'be good'	'being good'
b.	$\sqrt{māmā}$ 'light'	'light'	'be light'	'lightness'
c.	$\sqrt{lotu}$ 'religious'	'religious'	'be religious'	'religion'

Although the underlying categorial status cannot be determined in most syntactic environments, two categorial classes can be identified based on their interaction with causative and anticausative morphology. On the one hand, Samoan exhibits the causative prefix *fa'a-* that derives causative predicates from stative or anticausative predicates.

(227)

	stative		**causative**	
a.	*mamā* '(to be) clean'	→	*fa'a-mamā*	'(to make) clean'
b.	*nini'i* '(to be) very.small'	→	*fa'a-nini'i*	'(to make) very.small'
c.	*lelei* '(to be) good'	→	*fa'a-lelei*	'(to make) good'

However, in the context of proto-typical nominal elements *fa'a-* gives rise to a similative reading which roughly means "having the qualities of or being similar to what is denoted by the basic stem or phrase" (Mosel & Hovdhaugen 1992: 175). In contrast to the causative verb above, the resulting verb is stative (see also Read 2010).[51]

(228)

	nominal			**similative**	
a.	*manu*	'(the) animal'	→	*fa'a-manu*	'to be animal-like'
					* 'to make it an animal'
b.	*mauga*	'(the) mountain'	→	*fa'a-mauga*	'to be like a mountain'
					* 'to make it a mountain'
c.	*tamaitiiti*	'(the) child'	→	*fa'a-tamaitiiti*	'to be like a child'
					* 'to make it a child'

(Mosel & Hovdhaugen 1992: 175)

On the other hand, most PC-verbs take part in the stative/anticausative alternation without designated morphology. Therefore, bare PC-verbs can be interpreted as either stative or anticausative (229) – even though the anticausative interpretation usually correlates with the presence of the inchoative aspect marker (cf. Hohaus 2016, see also Matthewson et al. 2015, Koontz-Garboden 2007b for a Polynesian perspective).

(229)

	stative			**anticausative**	
a.	*mamā*	'be clean'	→	*mamā*	'become clean'
b.	*lelei*	'be good'	→	*lelei*	'become good'
c.	*ala*	'be awake'	→	*ala*	'wake.up'

However, a class of PC-lexemes form anticausative verbs by combining with the anticausative prefix *liu-* (from *liu* '(to) alter, change'; cf. Mosel & Hovdhaugen 1992: 394, Milner 1966). As in the context of the similative reading of *fa'a-*, this class of PC-lexemes expresses rahter proto-typical nominal concepts, including species-types (230)c.

[51] Some PC-roots that from a European perspective intuitively relate to nominal concepts such as *pata* 'butter, buttery' do not get a similative interpretation if combined with *fa'a-*, but pattern with stative PC-roots like *mamā* 'clean'.

(i)

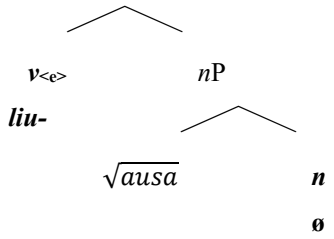
a.	*pata*	'(the) butter, buttery'	→	*fa'a-pata*	'to make it buttery, apply butter'
					* 'to be like butter'
b.	*ga'o*	'(the) fat, greasy'	→	*fa'a-ga'o*	'to make it grease, apply fat'
					* 'to be like fat'
c.	*māsima*	'(the) salt, salty'	→	*fa'a-māsima*	'to make it salty, apply salt'
					* 'to be like salt' (Mosel & Hovdhaugen 1992: 176)

(230)

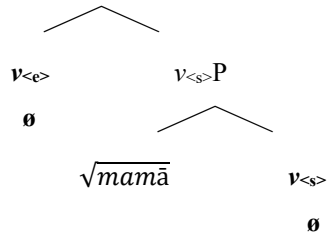
	nominal			**anticausative**	
a.	*suāvai*[52]	'liquid, be liquid'	→	*liu-suāvai*	'melt, turn into liquid'
b.	*ausa*	'steam, steamy'	→	*liu-ausa*	'evaporate, turn into smoke'
c .	*moa*	'fowl'	→	*liu-moa*	'turn into a fowl'

The distribution of anticausative morphology and the interpretative on the causative prefix *fa'a-* indicates that Samoan PC-lexemes split into two categorial classes (cf. Chung 2012 on Chamorro). Nominal roots like *ausa* 'steam' combine with a nominalizer *n* prior to verbalization by either a stative or eventive verbalizer – which are spelled out as *fa'a-* or *liu-* respectively.[53] In contrast, I assume that PC-roots that participate in the stative/anticausative alternation are underlyingly verbal (Krajinovic 2020, Koontz-Garboden 2007a, 2005) – see section 5.3.3.1 for a more detailed investigation of the internal structure of zero-derived anticausative predicates.

(231) a.



b.



In summary, Samoan exhibits a comparatively small inventory of derivational morphology. Still, morphosyntactic, semantic and phonological evidence indicates that bare lexemes can have a compositional structure that involves the stacking of categorizing functional heads. Therefore, Samoan primarily differs from languages with a richer inventory of categorizing morphology in that categorizing heads are not commonly overtly expressed.

5.2.2 Argument structure and differential argument marking

Turning to argument structure and case assignment, Samoan exhibits a split in case assignment in the context of transitive predicates. While most transitive verbs assign an ergative case to their subjects and absolutive case to their objects, a class of so-called

[52] Note that *suvai* is decomposable into more atomic parts as it is a compound of the derived base *su-a* 'contain water, liquid' (from *su* 'be moist') and *vai* 'water'. In Samoan, this type of word formation is productive with many verbs which are derived from more abstract roots.

[53] Typological studies suggest that languages can vary with respect the lexical category of PC-lexemes, i.e. adjectival, verbal or nominal, which may (or may not) affect the semantic properties of the lexeme (cf. Koontz-Garboden et al. 2019, Baker & Croft 2017, Francez & Koontz-Garboden 2017, Menon & Pancheva 2014, Croft 2001, 1991, Stassen 1997 for discussions).

'middle' verbs assign absolutive case to their subjects and oblique case to their objects (Tollan 2018, cf. Ball 2008, Chung 1978, Seiter 1978 on split-ergativity in Polynesian).[54]

(232) a. *Sā fau* ***e*** *le tamālao le fale.* ERG-ABS
PST build ERG SPEC man SPEC house.ABS
'The man built the house.'

b. *E alofa Iese* ***i*** *lona tuafafine.* ABS-OBL
GENR love Jessie.ABS OBL her sister
'Jessie loves her sister.' (Tollan 2018: 9)

Moreover, Samoan shows instances of DOM, as case-less internal arguments are pseudo-incorporated (Collins 2017, cf. Medeiros 2013 on Hawai'ian, cf. Massam 2001).

(233) a. *Sā tausi* ***e*** *le teine* ***le*** ***pepe.*** ERG-ABS
PST care ERG ART girl ART baby.ABS
'The girl took care of the baby.'

b. *Sā tausi* ***pepe*** *le teine.* PSEUDO NOUN INCORPORATION
PST care baby ART girl.ABS
'The girl took care of babies.' (Collins 2017: 12)

As the structural position and the licensing of nominal arguments of verbal predicates becomes crucial for the analysis of Samoan Type-B-RSVCs, I investigate the mechanisms behind split-ergativity and PNI. In particular, I present a novel account of split-ergativity in Samoan that treats the different case frames as two distinct strategies, in order to compensate for the limited licensing properties of Voice in syntactic ergative languages (cf. Nie 2020, Tollan 2018, Polinsky 2016).

5.2.2.1 Two types of transitives

The most transitive verbs show ERG-ABS case alignment with transitive subjects marked by prenominal ergative case marker *e* and objects, as well as intransitive subjects, marked by tonal absolutive case, realized as a preceding high boundary tone (Yu to appear, 2011, but see Calhoun 2017, 2015 for relating high boundary tones to information structure).

[54] The term "middles" is used here in the tradition of Polynesian grammar where it refers to verbs that trigger an ABS-OBL case frame. It is not to be confused with its more familiar use in referring to argument alternations of the type *This novel reads easily* (Schäfer 2008, Kemmer 1993, Condoravdi 1989, Roberts 1987).

(234) a. *Sā kiki [e le teine] [le polo].* TRANSITIVE
PST kick ERG SPEC girl SPEC ball.ABS
'The girl kicked the ball.'

b. *Sā asulu [le teine].* UNACCUSATIVE
PST fall SPEC girl.ABS
'The girl fell.'

c. *Sā siva [le teine].* UNERGATIVE
SPEC sing SPEC girl.ABS
'The girl sang.' (Tollan 2018: 5)

In addition to the ERG-ABS case, a class of so-called 'middle' verbs and unergative verbs that take cognate or hyponymous objects, exhibits ABS-OBL case alignment. Here, the subject receives absolutive case marking, whereas the indirect object is marked by the oblique case marker *i* (cf. Collins to appear, Blume 1998, Chung 1978).[55]

(235) a. *Sā siva [le teine] [i le uosi].* UNERGATIVE + HYPONOM. OBJECT
PST dance SPEC girl.ABS OBL SPEC waltz
'The girl danced a/the waltz.' (Tollan 2018: 7)

b. *Sā mana'o [le tamaititi] [i le masi].* MIDDLE
PST want SPEC child.ABS OBL SPEC cookie
'The girl wanted the cookie' (Tollan 2018: 9)

While ergative verbs express core transitive concepts, middle verbs are primarily restricted to the semantic domains of psych, emotion, perception and communication (236) (Collins to appear, Tollan 2018, Blume 1998, Cook 1993, also Ball 2008 on Tongan).

(236) a. **transitive [ERG-ABS] verbs**

'aumai	'bring'
'ave	'carry/bring/take'
fau	'build'
pu'e	'catch'
sasa	'hit/slap'

b. **middles [ABS-OBL] verbs**

'ote	'scold'
fesili	'ask'
fiafia	'enjoy/like'
alofa	'love'
mana'o	'want'

(Tollan 2018: 10 adapted from Mosel & Hovdaugen 1992: 104-106)

[55] Recently, Tollan (2018) makes an argument to treat *i*-case in the context of middle verbs as accusative case, based on the observation that in Samoan, *i*-marked objects pattern with internal arguments rather than oblique arguments (cf. accusative i-case in Polynesian languages with nominative-accusative alignment like Hawai'ian and Maori; Chung 1978). In this thesis, I do not adopt this terminology and treat Samoan *i*-case as oblique-case.

In current literature, split-ergativity is often attributed to the syntactic configuration of internal arguments (Coon & Preminger 2017, Coon 2013). While ERG-ABS case alignment occurs in the context of direct DP-objects, ABS-OBL alignment is triggered by oblique PP-objects. Consequently, PP-objects do not compete for case assignment as they receive inherent prepositional case and ergative case as a dependent case is not assigned. Yet, Tollan (2018) demonstrates that this account does not fit the Samoan data, since, according to several diagnostics, middle objects behave like direct objects of transitive verbs (cf. Nie 2020, Yuan 2018 on Inuit). Below, I review Tollan's (2018) argument from PNI.

5.2.2.2 Pseudo noun incorporation: DP vs. NP objects

As with other Oceanic languages (Hopperdietzel 2020b on Daakaka, Medeiros 2013 on Hawai'ian, Massam 2001 on Niuean), Samoan exhibits a type of DOM as in PNI, transitive verbs can take bare phrasal objects that receive an unspecific indefinite, non-individuated and non-affected interpretation (Collins 2017; see also section 7.3 on PNI in Daakaka). Based on the canonical properties of PNI, the internal argument can be analyzed as a structurally reduced *n*P argument.

Firstly, PNI-ed objects are not marked for case. As noted above, direct objects of transitive verbs are marked by tonal absolutive case while subjects are marked by the ergative case marker *e* (237)a. In contrast, the PNI-ed object lacks morphological case and the subject receives absolutive case, as in intransitive clauses.

(237) a. *Sa tausi e le teine* ***le pepe****.*
PST care ERG ART girl ART baby.ABS
'The girl took care of the baby.'

b. *Sa tausi* ***pepe*** *le teine.* PNI
PST care baby ART girl.ABS
'The girl took care of babies.' (Collins 2017: 12)

Secondly, while regular objects are located in a clause final position (238)a, PNI-ed objects undergo movement, together with the verb to a clause-initial position (238)b. Here, the edge of the VP is indicated by the adverb *pea* 'continually'.

(238) a. *Sa tausi pea e le teine* ***le pepe****.*
PST care continually ERG ART girl ART baby.ABS
'The girl went on taking care of the baby.'

b. *Sa tausi* ***pepe*** *pea le teine.* PNI
PST care baby continually ART girl.ABS
'The girl went on taking care of babies.' (Collins 2017: 12)

Consequently, PNI causes a change-of-word order from VSO to VOS with the object directly adjacent to the verb, i.e. no syntactic material may occur between the verb and its PNI-ed object.

(239) * *Sa tausi pea pepe le teine.* PNI
PST care continually baby ART girl.ABS
'The girl went on taking care of the baby.' (Collins 2017: 12)

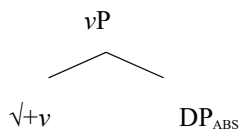
Thirdly, PNI-ed objects are not 'truly' incorporated into the verb phrase as they allow for phrasal operations such as adjectival modification (Massam 2009a, 2001). In (240), the PNI-ed object *ta'ifau ula* 'mischievous dogs' includes adjectival modification.

(240) a. *E su'e pea e le teine* ***le ta'ifau ula.***
GENR search continuously ERG SPEC girl SPEC dog.ABS mischievous
'The girl continuously searches for the mischievous dog.'

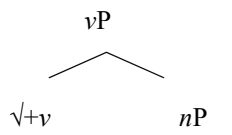
b. *E su'e* ***ta'ifau ula*** *pea le teine.* PNI
GENR search dog mischievous continuously SPEC girl
'The girl continuously searches for mischievous dog.' (Collins 2017: 13)

Based on these characteristics, PNI-ed objects have been analyzed as reduced *n*P-objects that lack (at a minimum) a D-layer, and do not need to be licensed by a nominal licenser (Collins 2017, Massam 2001, but seeBarrie & Mathieu 2016, Levin 2015, Baker 2014 for alternative implementations).[56]

(241) a. <u>(regular) DP-objects</u>



b. <u>(PNI-ed) NP-objects</u>



[56] The assumption that *n*P-arguments do not need to get licensed in Oceanic languages follows from the absence of φ-features on these structurally reduced elements. By the assumption that φ-features are introduced by designated function heads in DP, it has been argued that person features reside in D, number features on Num and gender features on *n* (see Kalin 2018, Kramer 2016, Danon 2011, Ritter 1991). This implies that even *n*Ps require abstract licensing as they exhibit gender features. However, Austronesian languages have been described as lacking gender as a grammatical category altogether (Potsdam & Polinsky to appear, Blust 2013, Corbett 2013). Therefore, I assume that *n*P in Oceanic languages does not exhibit any φ-features and do not need to be licensed by a nominal licenser.

Significantly, PNI only applies to direct objects in Samoan, but not to oblique (242) or indirect objects in ditransitive constructions (243). Because of this restriction, PNI can be used to discriminate the status of middle objects.

(242) a. *Sā tamo'e lātou **i le fale.***
PST run 3PL.PRON.ABS OBL SPEC house
'They were running around the house.'

b. * *Sā tamo'e **fale** lātou* PNI
PST run house 3PL.PRON.ABS
'They were running around in houses.' (Tollan 2018: 14)

(243) a. *Na ave e Anna le teu **i tamaiti** aso sā uma lava.*
PST give ERG Anna SPEC flower.ABS OBL children day sun every
'Anna gave flowers to children every Sunday.'

b. * *Na ave **tamaiti** e Anna le teu aso sā uma lava.* PNI
PST give children ERG Anna SPEC flower day sun every
'Anna gave flowers to children every Sunday.' (Tollan 2018: 14)

Indeed, middle objects (244) are able to undergo PNI, which indicates that they do not differ from direct objects of ergative verbs, and are merged as DPs in the internal argument position (Tollan 2018).

(244) a. *Sā mātou mulimuli **i le ta'avale mūmū**.* MIDDLE
PST 1PL.PRON.ABS follow OBL SPEC car red
'We were following the red car.'

b. *Sā mulimuli **ta'avale** le leoleo.* MIDDLE-PNI
PST follow car SPEC police.ABS
'The police were following cars.' (Tollan 2018: 14)

Thus, split-ergativity in Samoan is not determined by the structural difference of the position of the object (contra Coon & Preminger 2017, Coon 2013).

5.2.2.3 Split ergativity: PP vs. DP subjects

In traditional Polynesian grammar, split-ergativity has been commonly linked to the thematic role of the external argument (Mosel & Hovdhaugen 1992, Duranti & Ochs 1990, Cook 1988 on Samoan, cf. Ball 2008 on Tongan, Chung 1978 for an overview). Based on Dowty's (1991) idea of proto-roles, Tollan (2018) argues that the case split is primarily

motivated by the location of the external argument on a scale of high agentive and low agentive properties (cf. Collins to appear, Blume 1998).

(245)

a. **Proto-high agent:**	b. **Proto-low agent:**
(i) initiates an event	(i) initiates an event
(ii) experiences an event	(ii) experiences an event
(iii) triggers an effect upon	(iii) neither affects another entity, another entity nor is physically affected
(iv) brings about a change-of-state	(iv) neither brings about nor undergoes a a change-of-state.
(v) is effortful	
(vi) is volitional	
(vii) concludes an event	
→ ergative-marked subjects	→ absolutive-marked subjects (Tollan 2018: 39)

According to these proto-roles, the classification of external arguments explains the split in case assignment – if the external argument qualifies as a proto-high agent, it is marked by ergative case; if it qualifies as a proto-low agent, it is marked by absolutive case. Thereby, Tollan (2018) integrates various semantic properties that have been claimed to be tied to Samoan split-ergativity, such as volition, affectedness, effort and agentivity.[57] Against this background, she proposes an analysis in which high and low agentive external arguments are merged in different positions; whereas high agentive agents merge in Spec, VoiceP, low agentive argument are introduced in Spec, *v*P (cf. Massam 2009b on Niuean, also Tollan & Oxford 2018, Polinsky 2016, Wiltschko 2006). However, this analysis is in conflict with the assumption that the *v*P-internal argument position is restricted to event modification, as outlined in section 2.3. Instead, I develop a novel account of split-ergativity in Samoan, adopting Polinsky's (2016) analysis of syntactic ergativity.

By treating ergative case as a prepositional case, Polinsky (2016) claims that ergative marked subjects are introduced inside a PP in the specifier of a transitive VoiceP. As such, ergative marked subjects differ from absolutive marked subjects not only in terms of morphological case but also in their syntactic category (PP vs. DP). Therefore, ergative case cannot be classified as a dependent case in syntactic ergative languages, but is inherently assigned by the preposition. Crucially, the status of Samoan as a syntactic ergative

[57] Based on Cruse's (1973) characterization of agentivity, Collins (to appear) refines the concept of agentivity relevant for Samoan case assignment to the notion of self-directed initiators (SDI). Moreover, Collins argues that although the thematic role of the external argument is a necessary criterion for case assignment, it is not sufficient. Instead, the theta-role of the object does also have an impact on the case-frame; namely, if the object is interpreted as a goal, the arguments get ABS-OBL case. This additional criterion may be applied to yet unexplained exceptions, such as directed motions verbs (such as *asiasi* 'visit') or communication verbs (such as *logo* 'inform').

language is well-established in the literature (Muāgututi'a 2018, Polinsky 2016). However, this holds true only for transitive ergative verbs, but not for transitive middle verbs.

One significant feature of syntactic ergativity is the contraint on ergative subjects to not undergo A/A'-movement. Instead, fronted ergative subjects require a resumptive element at the site of extraction (Polinsky 2016). Such phenomena are observed in Samoan – if ergative subjects appear in an A' position, the resumptive element *=ina* cliticisizes to the verb (Muāgututi'a 2018, Cook 1996, 1994, Mosel & Hovdhaugen 1992).[58] In (246), the fronted ergative subject *e le tama* ('the boy') occurs without its ergative case marker in a clause-initial A'-position, as indicated by the topic marker *'o* (Hohaus & Howell 2015). Here, the resumptive element *=ina* must attach to the verb.

(246) a. *Na fufulu e le tama le ta'avale*
PST wash ERG SPEC boy SPEC car.ABS
'The boy washed the car.'

b. *'O le tama na fufulu**=ina** le ta'avale*
ALT SPEC boy.ABS PST wash-RSMP SPEC car.ABS
'It is the boy who washed the car.' (Cook 1996: 63)

Likewise, ergative clitic pronouns like *ia* 's/he, which undergo A-movement to a higher syntactic position between the tense/aspect marker and the verb, are not marked for ergative case, but co-occur with the resumptive element *=ina* cliticisized to the (ergative) verb (Muāgututi'a 2018, Tollan 2018, Chung 1978).

(247) *Sā ia tipi**=ina** le 'ulu i le naifi.*
PST 3SG.CL cut=RSMP SPEC breadfruit OBL SPEC knife
'He cut the breadfruit with a knife.' (Chung 1978: 222)

In contrast, absolutive subjects of middles are not subject to such restrictions. In (248), the fronted subject clitic *ia* 's/he' does not require the resumptive element *=ina* on the middle verb *mana'o* 'want'.

[58] There is no consensus about the status of the *=ina*. Proposed analyses range from passive (Chung 1978, Churchward 1926, Downs 1949), ergativizing (Mosel & Hovdhaugen 1992), marker of increased transitivity (Ota 1999) or fronted ergative arguments (Cook 1996). In this thesis, I speculate that *=ina* itself is a resumptive element (Cook 1994). Tentative evidence for this assumption comes from its similarity to the demonstrative *nā* (Mosel & Hovdaugen 1992: 290). Notably, the cognate demonstrative *ena* in Tongan may function as a resumptive element in similar constructions (Polinsky 2016).

(248) a. *E mana'o 'oia i teine 'uma o le nu'u.*
GENR want 3SG.PRON.ABS OBL girl all GEN SPEC village
'He desires all the girls of the village.' (Chung 1978: 223)

b. *'ua ia mana'o i ai.*
INCH 3SG.CL want OBL 3SG
'He desires her.' (Chung 1978: 222)

However, some middle verbs can form ergative/transitive variants by the derivation with the so-called 'ergativizing' suffix *-C(i)a* (Cook 1996, Mosel & Hovdhaugen 1992, Milner 1966). In its derived form, *mana'o-mia* 'want' denotes an event that implies a higher volitionality of the external argument, which now qualifies as an agent. Consequently, its arguments appear in an ERG-ABS alignment (249).

(249) *'ole'ā mana'o-**mia** e a'u se fesoasoani.*
FUT want-ERGVZ ERG 3SG.PRON NSPEC help
'I need some help.' (Cook 1996: 69)

Crucially, in the context of an ergativized verb, the resumptive element *=ina* cliticisizes to the right of the verb stem if the ergative pronominal subject appears in a preverbal position, as expected under syntactic ergativity.

(250) *'ole'ā 'ou mana'o-**mia=ina** se fesoasoani.*
FUT 1SG.CL want-ES=RESMP NSPEC help
'I need some help.' (Cook 1996: 69)

Adopting Polinsky's (2016) approach to syntactic ergativity, the unavailability of A/A'-bar movement for ergative subjects follows from the prepositional nature of the ergative subject. In the absence of preposition stranding and a pied-piping mechanism in these languages, PPs are not available for A/A'-movement. Instead, the fronted subject is directly merged in the respective A/A'-position with a co-referential resumptive element in its base-generated position.[59] Therefore, the difference between ergative and absolutive subject is the category of the external argument, which is merged to external argument

[59] Clemens & Tollan (to appear) suggest that syntactic ergativity, i.e. the availability of the ergative subject for movement, results from cross-dependency effects. Essentially, they propose that A-movement of the internal argument to Spec, VoiceP for the purpose of absolutive case assignment by T blocks the extraction of the ergative argument. Thus, ergative languages differ with respect to the locus of the absolutive: high on T in syntactic ergative languages or low on *v* in morphological ergative languages (Coon et al. 2014). In both languages, they take the ergative as an inherent case assigned to the external argument DP by Voice (cf. Coon 2013, Legate 2008, Aldridge 2004, Woolford 1997). Another approach is given by Deal (2017) who proposes A'/A-movement is sensitive to accessibility restrictions determined by the morphological case.

introducing head Voice; ergative subjects are merged within a PP, whereas absolutive subjects are merged as DPs. The observation that Voice can introduce DP-external arguments in the context of middle verbs raises questions on the mechanisms behind split-ergativity.

To account for this split, I propose that syntactic ergativity arises from the limited licensing function of Voice in syntactic ergative languages, such as Samoan (cf. Nie 2020). In particular, I assume that in syntactic ergative languages, Voice does not function as a secondary licenser, i.e. it does not come with its own nominal licensing feature. Instead, Voice solely inherits a single (strong) licensing feature *[φ] from T (cf. section 1.1.3). Thus, Voice cannot license two DP arguments in transitive configurations. Instead, ergative and middle constructions represent different strategies to resolve transitive configurations.[60]

(251) Voice *[φ]

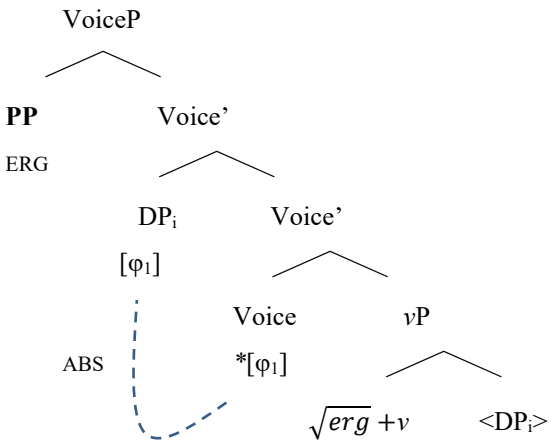
In the context of ergative verbs, the internal argument merges as a DP that is licensed by the Voice. By checking the strong licensing feature on Voice, the internal argument moves to the Spec, VoiceP position. As Voice bears a single licensing feature, there is no dependent case to assign and the internal argument receives unmarked absolutive case. A consequence of a single licensing feature is that the external argument cannot be merged as a DP because Voice cannot license another DP. Instead, the ergative marked external argument merges within a PP where it is licensed by P. Thereby, in syntactic ergative languages ‚PP-subjects circumvent the limited licensing facilities of Voice.

[60] This implies that there is no dependent case in Samoan as Voice only license a single DP argument, which is why there is no case competitor in the licensing domain (Baker 2015, McFadden 2004, Marantz 1991, see Collins to appear for an analysis that treats both ergative and accusative in Samoan as dependent cases). Instead, Samoan exhibits two inherent cases, namely ergative and oblique.

(i) Case Hierarchy in Samoan

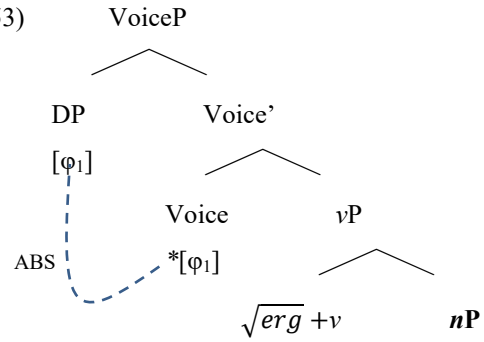
inherent	>	dependent	>	unmarked
ergative				*absolutive*
oblique				

(252)



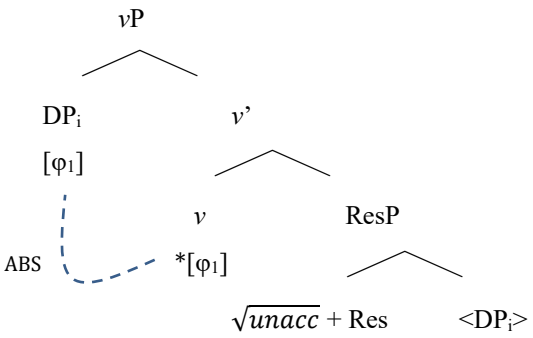
In the context of PNI, the internal argument merges as a structurally reduced NP. As it lacks any φ-features, it remains unlicensed and does not check the licensing feature on Voice. Therefore, Voice can license a DP external argument which receives absolutive case.

(253)



Adopting the view that unaccusative verbs lack a Voice projection, I assume that the highest projection of the verbal domain inherits the licensing features of T. Therefore, *v* acts as a nominal licenser in the context of unaccusative verbs carrying a strong *[φ] feature. The object is licensed by *v* and moves from the complement to the specifier position where it is assigned absolutive case.

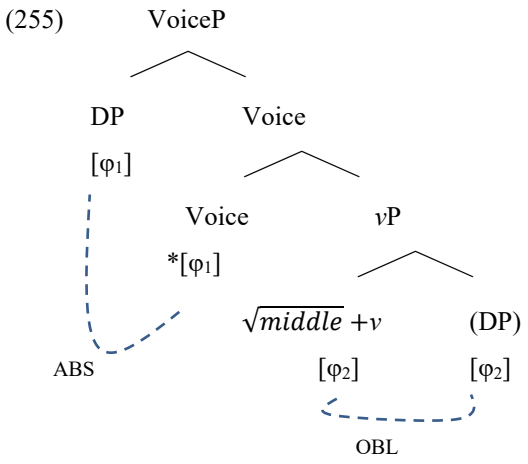
(254)



While in syntactic ergative languages like Samoa, ergative verbs circumvent the limited licensing capacities of Voice by introducing the external argument within a PP, Samoan

middle verbs display an alternative strategy of nominal licensing, which is similar to antipassives in other languages (cf. Nie 2020, Coon 2019, Yuan 2018, Aldridge 2004, Otsuka 2000). Although it has been argued that middle verbs are different from productive antipassive constructions in other ergative languages (Otsuka 2000 on Tongan, Chung 1978), they are similar in that both structures are morphosyntactically and semantically less transitive (Collins to appear, Tollan 2018, Blume 1998). Following this intuition, I propose that middle and unergative roots merge with a variant of the *v* that has [φ]-features. This feature licenses the internal argument and assigns inherent oblique case. As the internal argument is not licensed by Voice, the external argument can merge as a DP in Spec, VoiceP. The same argument holds true for unergative verbs.[61]

(255)



According to this analysis, middle verbs differ from ergative verbs in that they assign inherent oblique case to their lexical arguments. Consequently, oblique case on internal arguments is governed by the root class and only indirectly by the agentive properties of the external argument.

To summarize, I propose that Samoan split-ergativity arises from two distinct strategies to circumvent the limited licensing properties of Voice. On the one hand, subjects of ergative verbs are licensed within an ergative case assigning PP. On the other hand, middle verbs idiosyncratically assign oblique case and license the internal argument within the *v*P. A more detailed investigation into the properties of the respective root classes may provide additional insights in the observed split in the Samoan case system.[62]

[61] Notably, ERG-OBL configurations are ungrammatical in Samoan. This follows from the nature of the inherited licensing feature on Voice. If the oblique object is already licensed by its *v* head, the strong *φ*-feature on Voice fails to find an antecedent which leaves the EPP-like feature unsatisfied.

[62] There are some middle roots that can form ergative verbs by combining with the ergativizing suffix *-(C)ia* (cf. Mosel & Hovdhaugen 1992). Notably, most middle verbs that can be ergativizid belong to the class of subject-experiencer verbs. Cross-linguistically, it has been argued that these verbs denote states

5.2.3 VSO order and the clausal architecture

Like other Polynesian languages, Samoan exhibits a verb-initial word order (VSO). To account for verb-initial word order in these languages, two hypotheses have been discussed in the literature: (i) head movement of V to I (cf. Clemens & Tollan to appear, Polinsky 2016, Clemens 2014, Otsuka 2005 on Tongan, 2000, Pearce 2002 on Maori) and (ii) phrasal VP-movement to Spec, IP (Collins 2017 on Samoan, see also van Urk 2019a on Imere, Medeiros 2013 on Hawai'ian, Massam 2001 on Nieuan). For Samoan, Collins (2017) presents compelling evidence for phrasal verb movement.

Firstly, Samoan displays low *v*P-coordination with the coordinator *ma*. In the examples below, two complex verb phrases, including adverbial modifier (256)a and secondary predicates (256)b, are coordinated. Significantly, the coordinated VPs move as a single unit to a clause initial position, while stranding the shared subject and object arguments in a clause final position.

(256) a. *E [[aulelei tele] ma [atamai tele]] fo'i le fafine.*
GEN beautiful very and intelligent very EMPH SPEC woman
'The woman is very beautiful and very intelligent'

b. *Sā [[tā lalo] ma [tipi fa'alaititi]] e Simi le la'au.*
PST fell DIR and cut CAUS-small ERG Simi SPEC tree
'Simi cut down and chopped the tree small.' (Collins 2017: 22)

Secondly, PNI-ed objects move with the verb over the external argument to a clause-initial position deriving VOS order. As shown in section 5.2.2.2, PNI-ed objects are phrasal *n*P-objects and are not incorporated into the verbal head. As structurally reduced *n*P can be targeted for movement, its position indicates that PNI-eds object move within the VP over the external argument.

(257) a. *Sā tausi pea e le teine le pepe.*
PST care continually ERG SPEC girl SPEC baby.ABS
'The girl took care of the baby.'

rather than events (Landau 2010, Levin & Rappaport Hovav 2005, Iwata 1995, Grimshaw 1990 and others). Due to their stative nature, subject experiencer verbs are not compatible with an agentive Voice head, but combine with Voice that introduces a holder role (Hirsch 2018, Alexiadou et al. 2015, Kratzer 1996). Therefore, it may be the case that the ergativizing suffix *-(C)ia* is the spell-out of agentive Voice in a context of subject experiencer roots that combine with an eventive *v* head. As a result, split-ergativity could be reinterpreted as a stative/dynamic split (cf. Coon & Preminger 2017, Milner 1966).

b. *Sā [tausi pepe] pea le teine.*
PST care baby continually SPEC girl.ABS
'The girl took care of babies.' (Collins 2017: 12)

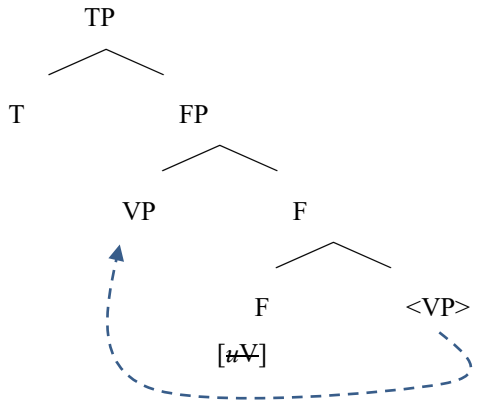
Thirdly, non-verbal predicates like PPs, or DPs that are derived by a zero-copula, appear in the clause-initial predicate position. As the non-verbal predicates are phrasal by themselves (258), they provide a further counterargument to a head-movement analysis.

(258) a. *Sā [i Apia]$_{PP}$ lo mātou tinā. i lea taimi.*
PST LOC Apia our mother.ABS OBL that time
'Our mother was in Apia at that time.'

b. *Sā [ali'i matua]$_{DP}$ Pili.*
PST chief old Pili.ABS
'Pili was an old chief.' (Collins 2017: 7)

Based on these observations, Collins (2017) concludes that the VP undergoes phrasal movement to the specifier of a functional projection in the inflectional domain below T. This movement is claimed to be motivated by a verbal EPP feature *[*u*V] (Doner 2019, Aldridge 2002, Massam 2001).

(259)



To account for the stranding of VP-internal arguments in a clause-final position, I adopt a recent approach by van Urk (2019a) based on distributed deletion (cf. Fanselow & Cavar 2001).[63] Adopting a copy-theory of movement, van Urk (2019a) argues that the whole

[63] Another common approach to account for argument stranding is remnant movement in which VP-internal arguments are evacuated to a higher position prior to VP-movement (cf. Medeiros 2013, Massam 2001). For Samoan, Collins (2017) suggests that all VP-internal arguments move to Spec, VoiceP to satisfy a conditional EPP-feature on Voice before the *v*P moves to its landing position. However, in the absence of PP pied-piping in syntactic ergative languages such as Samoan, the evacuation of *v*P-internal PP-arguments is left unexplained. Note that a distributed deletion account does not exclude DP-arguments from moving to higher position and is, therefore, compatible with the assumption that the internal argument moves to Spec, VoiceP, to be visible for T (van Urk 2019a).

VP, including all VP-internal material, undergoes phrasal movement to its landing position in the inflectional domain, leaving an intact copy at the extraction site. The surface verb-initial word order is derived post-syntactically by two well-formedness constraints at PF. Firstly, every element that does not carry the feature F, which is responsible for movement is deleted in the higher copy (cf. distributed deletion; Fanselow & Cavar 2001).

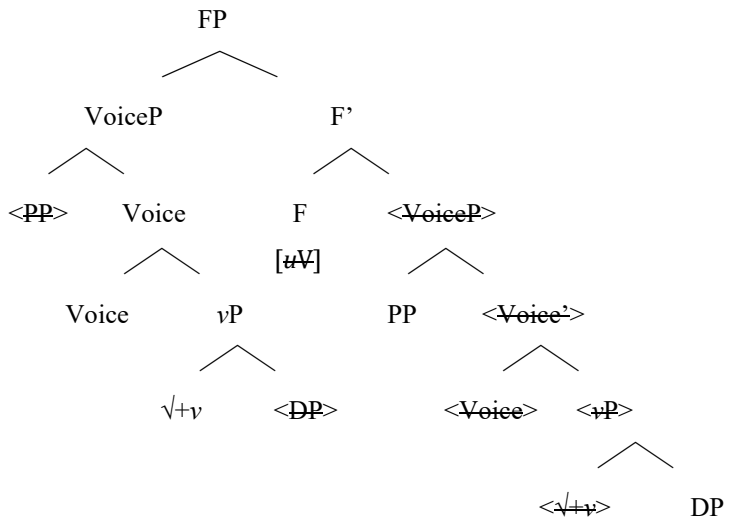
(260) **REALIZE GOAL (van Urk 2019a: 6):**
For an instance of movement triggered by the feature F, spell out only material that carries the interpretable feature F.

Secondly, syntactic elements that are part of the same phase must occur in the same spell-out. As such, PNI-ed objects are spelled-out together with the verb in the higher copy, as they do not constitute a phase on their own (cf. argument-φ; Clemens 2014).

(261) **SPELL OUT TOGETHER (van Urk 2019a: 10):**
A head H and any dependent YP in a selectional relationship must spell-out in the same XP, where XP immediately dominates H and YP.

As VP-fronting is considered to be triggered by a [*u*V]-feature, only constituents that carry a [V]-feature, i.e. verbal projections like VoiceP and *v*P – are spelled-out in the higher position, together with non-phasal constituents, such as PNI-ed *n*P-objects (cf. Norris 2014, Grimshaw 2000). In contrast, phasal constituents, such as DPs, PPs or CPs, are spelled-out in the lower copy (262).

(262)



5.2.4 Summary

This section provides an overview of the morphosyntactic structure of the Polynesian language Samoan, which differs significantly from languages, such as English, regarding

derivational morphology, argument and clause structure. On the one hand, I have shown that Samoan makes heavy use of zero morphology, which complicates the discrimination of the compositional nature of (verbal) predicates. On the other hand, I have argued that ergative marked external arguments are merged within a PP in Spec, VoiceP. This unusual property follows from the limited licensing capacities of Voice in syntactic ergative languages like Samoan. Lastly, I have adopted an approach of phrasal VP-movement to account for Samoan VSO word order, in which DP arguments are spelled-out in their base-generated position. In the course of the analysis of the argument and event structure of verbal predicates, including Type-B-RSVCs in chapter 6, the language specific morphosyntactic properties of Samoan will play a crucial role in the argumentation.

5.3 *fa'a*-causatives as Voice-driven allomorphy

The next two sections focus on the morphosyntactic and semantic properties of predicates that occur in Type-B-RSVCs in Samoan. Starting with the morphologically complex V2, this section concentrates on the morphosyntactic properties of *fa'a*-causatives.[64] The Samoan reflex of the Proto-Oceanic causative prefix **pa(ka)*- productively derives causative verbs from unaccusative, unergative and middle verbs, but not transitive verbs (Mosel 2004, Mosel & Hovdhaugen 1992). As illustrated in (263), the unaccusative verb *mamā* 'be.clean' gets a causative interpretation 'to clean' when it is derived by *fa'a*-. In addition, *fa'a*- introduces an ergative marked, agentive external argument.

(263) a. *Sā mamā le laulau*
PST clean SPEC table.ABS
'The table was clean.'

b. *Sā* ***fa'a-****mamā* ***e*** ***Pita*** *le laulau*
PST CAUS-clean ERG Peter SPEC table.ABS
'Peter cleaned the table.'

In contrast, non-volitional (natural) causers are introduced as oblique argument, with the predicate appearing in its bare form (264) (Koopman 2012).

(264) a. * *Sā* ***fa'a-****mamā* *e le matagi le laulau*
PST CAUS-clean ERG SPEC wind SPEC table.ABS
Intended: 'The wind cleaned the table.'

[64] This section represents a revised version of Hopperdietzel (to appear).

b. *Sā mamā le laulau* ***i le matagi***.
PST clean SPEC table.ABS OBL SPEC wind
'The wind cleaned the table.'

To investigate the morphosyntactic properties of Samoan *fa'a*-causatives, I will classify *fa'a*-causatives according to their selectional and bundling features. The following morphosyntactic study reveals that while *fa'a*-causatives can be shown to combine with pre-categorized VoiceP or *v*P complements. In addition, *fa'a*-causatives exhibit a 'bundling paradox' in showing instances of both Voice-bundling and non-Voice-bundling properties. To account for this observation, I propose that *fa'a-* is the spell-out of an eventive light verb *v* in bi-eventive contexts below Voice (265) (Wood & Marantz 2017).

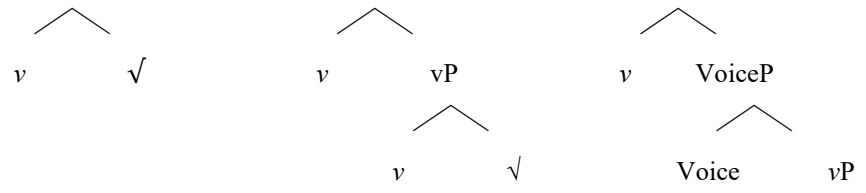
(265) $[v_{<e>}]$ ↔ *fa'a-* / $[_{VoiceP}$ Voice $[_{vP}$ ___ $vP_{<e/s>}]]$
↔ ø
…

Therefore, Samoan *fa'a*-causatives differ from English-type *zero*-causatives, e.g. *flatten* or *darken*, in their relation to agentive semantics and the morphosyntactic size of the embedded eventuality (cf. section 2.2.4 and 3.4).

5.3.1 Typology of causatives

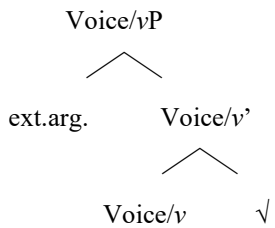
To account for cross-linguistic variation in causatives, Pylkkänen (2008) introduces two major syntactic parameters by which causative predicates can vary morphosyntactically – selection and bundling (Harley 2017). Regarding the selectional parameter, causatives may combine with complements of different sizes. While causatives embed root-sized complements in some languages (e.g. English zero-causatives), causatives in other languages may embedded larger constituents such *v*P or VoiceP (e.g. Chemuhuevi *-tu'i-* causatives). Therefore, three basic types of causatives are expected to occur cross-linguistically – root-selecting (266)a, *v*P-selecting (266)b and VoiceP-selecting causatives (266)c.

(266) a. Root-selecting: b. *v*P-selecting: c. VoiceP-selecting:

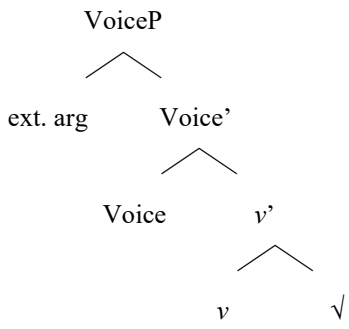


With respect to the bundling parameter, causatives may bundle the features of the causing-event-introducing head *v* and the external-argument-introducing head Voice to a single syntactic projection or realize them separately on their designated heads. Consequently, in some languages, causative morphology obligatorily introduces an agent (such as Persian; Folli et al. 2005), whereas in other languages, the external argument may be introduced independently (such as Hiaki; Harley 2013). This gives us two types of causatives – Voice-bundling (267)a and non-Voice-bundling causatives (267)b .

(267) a. Voice-bundling:



b. non-Voice-bundling:



By combining the selectional together with bundling properties, Pylkkänen (2008) predicts the following typology of causatives in the world's languages (Table 5). In this thesis, I extend the concept of *v*P-*selecting* causatives to *x*P-*selecting* causatives to refer to causatives that combine with pre-categorized constituents smaller than Voice (Folli et al. 2005). Causatives embedding non-root complements are 'productive causatives'.

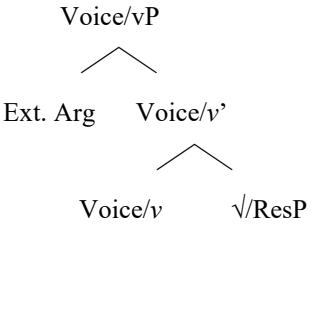
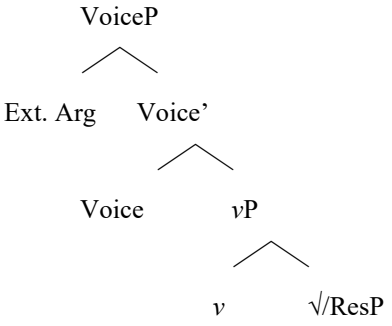
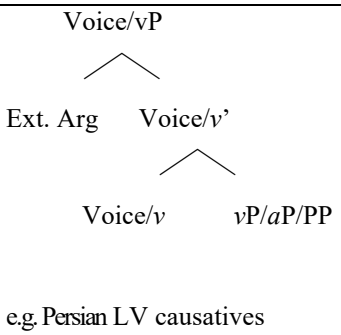
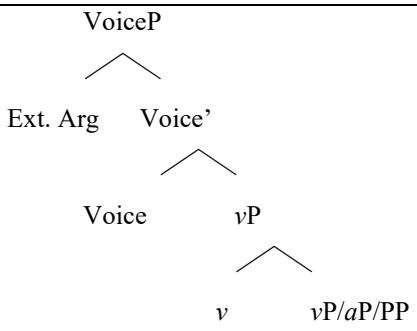
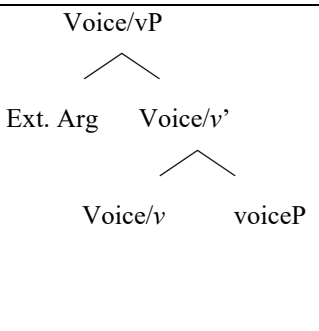
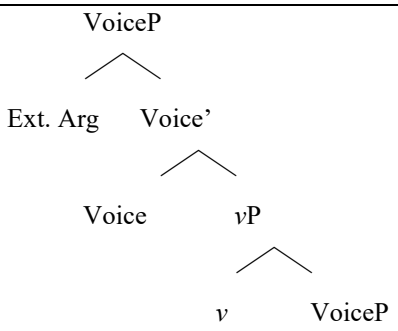
	Voice-bundling	**Non-Voice-bundling**
Root-selecting (lexical)	 e.g. Chuj lexical causatives (Coon 2019)	 e.g. Hiaki lexical causatives (Harley 2013)
*x*P-selecting (productive)	 e.g. Persian LV causatives (Folli et al. 2005)	 e.g. Finnish *-tta*-causatives (Pylkkänen 2008)
VoiceP-selecting (productive)	 e.g. Korean *-keyha*-causatives (Jung 2014)	 e.g. Chemehuevi *tu'i*-causatives (Serratos 2008)

Table 5: Typology of selectional and bundling features in the world's languages.[65]

In the following, I illustrate characteristics that are related to different types of causatives in the world's languages, with a focus on the interaction of categorizing, causativizing and Voice-related morphology (Harley 2017, Pylkkänen 2008).

[65] Persian light verb causatives are actually not an ideal candidate to illustrate *x*P-causatives as they are an instance of periphrastic causatives, whereas all other examples come from morphological causatives. I was not able to find any description of morphological causatives that are both *x*P-selecting and Voice-bundling in the current literature. However, as broad-scale typological studies are still pending, it is not clear whether this gap results from the restricted data set or from morphosyntactic constraints.

In root-selecting Voice-bundling languages, verbalizing, causativizing and external-argument introducing functions are located on a single head.[66] In Chuj, for example, transitive roots like *ch'ak* 'fell' form causative verbs by merging with silent Voice/*v* head that categorizes the root and introduces both the causing event and the external argument. In its anticausative form (268), the Voice/*v*, spelled out as *-j*, does not introduce an agent role but categorizes the root. The absence of the agent role is indicated by its incompatibility with the agent-oriented adverbial *sk'annhej sk'o'ol winh* 'on purpose' (Coon 2019).

(268) *(*Sk'annhej sk'o'ol winh)* *ix-ch'ak-**j**-i* *te* *' te'* CHUJ
on purpose PFV-fell-ANTICAUS CLF tree
'The tree was felled (*on purpose).' (Coon 2019: 70)

Moreover, the bundled Voice/*v* head is also responsible for passivization. In contrast to the anticausative form in (268), the passive verb form is licenses with agent-oriented adverbs indicating the presence of an implicit agent argument (269).

(269) *(Sk'annhej sk'o'ol winh)* *ix-ch'ak-**chaj*** *te'* *te'* CHUJ
on purpose PFV-fell-PASS CLF tree
'The tree was felled (on purpose).' (Coon 2019: 68)

Therefore, a single head bundles the feature of root categorization and the introducing of a causing-event and an external-argument.[67] As the bundled head directly merges with the root, category-defining morphology cannot occur in between the root and the causative morpheme.

In contrast, in root-selecting non-Voice-bundling causatives, the causative *v* head carries categorizing and causativizing functions, but is independent from Voice-related functions such as passivization. This type is represented by Hiaki lexical causatives. Here, the categorizing suffix alternates between a transitive (*ta-*) and intransitive variant (*te-*), suggesting that it bundles both categorizing and causativizing features (Harley 2013).

[66] This is also true in *a*P/PP-selecting causatives as in Persian causatives in which light verbs derive causative (i)a, anticausative (i)b and passive verb forms from PPs in complementary distribution (i). The crucial difference to root-selecting causatives is the pre-categorized nature of the complement (Folli et al. 2005).
(i) a. *âb* *be jush* ***âmad***. b. *Nimâ* *âb-ro* *be* *jush* ***âvard***. PERSIAN
water to boil came Nima water-râ to boil brought
'The water boiled.' 'Nima boiled the water.' (Folli et al. 2005: 1378)

[67] Bruening (2013) proposes that passive is independent from Voice and projects its own PassiveP above an active Voice layer. Adopting such an approach, the distribution of passive morphology would not hold as a reliable diagnostic for Voice-bundling as Passive and Voice morphology would be located on separate heads. However, as pointed out by Harley (2017: FN16), the difficulty of passivizing an agentive light verb construction in Persian (and Italian) questions a Voice-recursion analysis. In this thesis, I follow Harley's argumentation and take active and passive voice as variants of the same Voice head.

(270) a. *Maria vaso-ta ham-**ta**-k.* HIAKI
Maria glass-ACC break-TR-PFV
'Maria broke the glass.'

b. *Uu vaaso ham-**te**-k.*
ART.NOM glass break-INTR-PFV
'The glass broke.' (Harley 2017: 8)

In contrast to Voice-bundling root-selecting causatives, Voice-related morphology – like the passive suffix *-wa-* – can attach on top of the causativizing suffix *ta-*. Hence, the ability to passivize lexical causatives show that Voice and Caus/*v* do not bundle. [68]

(271) *Uu vaaso ham-**ta-wa**-k.* HIAKI
ART.NOM glass break-TR-PASS-PFV
'The glass was broken by someone.'(Harley 2017: 8)

Unlike root-selecting causatives, productive causatives select for precategorized complements – i.e. *v*P/*a*P/PP- or VoiceP. Hence, categorization morphology can occur between the root and causative morphology. In productive non-Voice-bundling causatives, the passivization of such forms is additionally possible. This is exemplified by Chemehuevi VoiceP-selecting *tu'i*-causatives below. In (272), verbalizing *-ga*, causativizing *–tu'i* and passivizing morphology *–tü* attach independently to the root (Serratos 2008).

(272) *Atapü-tsi-a tupa-**ga-tu'^{w}i-tü**-pü.* CHEMEHUEVI
crow-NPN-obl black-be-CAUS-PASS-PST
'Crow's being made black.' (Serratos 2008: 107)

In addition, productive causative morphology in non-bundling languages like *-tu'i* may also occur in VoiceP-selecting anticausatives (similar to periphrastic get-anticausatives in English; Biggs & Embick 2019).

(273) *Sünawa-vi kani-gai-mi-yü yunakaimü-wa'i-vü,* CHEMEHUEVI
coyote-NPN.NOM house-have-USIT-PST company-with-3SG.POSS

*tüvi-pü-a tügü-**tu'i**-kwa'i-k^{y}a.*
earth-NPN-OBL hungry-CAUS-away-PFV
'Coyote was dwelling with his company when it was hungry times on earth.'
(lit: '(…), when hunger was caused on earth.' (Serratos 2008: 240)

[68] Note that the complementary distribution of causative and anticausative morphology is not a defining characteristic of non-bundling causatives. English root-selecting non-bundling zero-causatives such as *melt* participate in the causative alternation without a designated causative morphology (Alexiadou et al. 2015).

Finally, productive Voice-bundling causatives cannot be passivized or used in anticausative contexts. For example, in Korean VoiceP-selecting *-keyha*-causatives, the passive suffix *-eci* cannot co-occur with the causative suffix (274)b. Note that the embedded verb introduces its own external argument (here: *Mary-eykey*) as expected for VoiceP-selecting causatives (Jung 2014).

(274) a. *Emma-ka Mary-eykey ppang-ul kwuw-**keyha**-ess-ta*. KOREAN
mother-NOM Mary-DAT bread-ACC bake-CAUS-PST-COMP
'Mother made Mary bake bread.' (Jung 2014: 152)

b. * *Mary-ka ppang-ul kwup-**keyha-eci**-ess-ta.*
Mary-NOM bread-ACC bake-CAUS-PASS-PST-COMP
'Mary was made to bake bread.' (Jung 2014: 55)

Unlike non-bundling Chemehuevi *tu'i*-causatives, Korean *keyha*-causatives cannot be used intransitively. Instead, productive anticausatives are derived by the designated anticausative suffix *-keytoy*, which is in complementary distribution with-*keyha*.

(275) *Yenghi-ka ppang-ul kwup-keytoy-ess-ta.* KOREAN
Yenghi-NOM break-ACC bake-ANTICAUS-PST-COMP
'Yenghi got to bake bread.' (Jung 2014: 182)

	Voice-bundling	Non-Voice-bundling
Root-selecting (lexical)	(i) unaccusative causatives impossible (ii) passivization impossible (iii) impossible to causativize unergatives and transitives (iv) no category-defining morphology can intervene between root and CAUSE (v) embedded ext. argument impossible	(i) unaccusative causatives possible (ii) passivization possible (iii) impossible to causativize unergatives and transitives (iv) no category-defining morphology can intervene between root and CAUSE (v) embedded ext. argument impossible
xP-selecting (productive)	(i) unaccusative causatives impossible (ii) passivization impossible (iii) possible to causativize unergatives or transitives (iv) categorizing morphology that is not external argument introducing can intervene between root and CAUSE (v) embedded ext. argument impossible	(i) unaccusative causatives possible (ii) passivization possible (iii) possible to causativize unergatives or transitives (iv) categorizing morphology that is not external argument introducing can intervene between root and CAUSE (v) embedded ext. argument impossible
VoiceP-selecting (productive)	(i) unaccusative causatives impossible (ii) passivization impossible (iii) possible to causativize unergatives or transitives (iv) all types of verbal morphology can intervene root and CAUSE (v) embedded ext. argument possible	(i) unaccusative causatives impossible (ii) passivization impossible (iii) possible to causativize unergatives or transitives (iv) all types of verbal morphology can intervene root and CAUSE (v) embedded ext. argument possible

Table 6: Selectional and bundling features of causative verbs (Harley 2017, Pylkkänen 2008).

5.3.2 Selectional properties

In the following section, I classify Samoan *fa'a*-causatives according to Pylkkänen's (2008) typology based on the distribution of categorizing morphology, the absence of idiosyncratic effects, pseudo-noun incorporation, as well as combinatoiral restrictions.

5.3.2.1 Categorizing morphology

As discussed in section 5.2.1, Samoan exhibits a rather small inventory of category-defining morphology but makes heavy use of zero-derivational morphology. Two exceptions are the anticausative prefix *liu-* and the de-agentivizing prefix *ma-*. If it were the case that *fa'a*-causatives are root-selecting causatives, such morphemes should not be able to intervene in the root and *fa'a-*. This prediction is not borne out by the data.

Firstly, the de-agentivizing prefix *ma-* can occur in between the root and *fa'a-* (Mosel & Hovdhaugen 1992: FN24). In (276)b, the stative verb *ma-tala* 'to be opened'

encodes the resulting state of an event denoted by a change-of-state root *tala* 'to unfold/open' (cf. Dhillon et al. 2009 on Niuean, Krupa 1982 on Polynesian, Evans 2003 for a Proto-Oceanic reconstruction).[69]

(276) a. *Tala le 'upega.*
open SPEC net.ABS
'Unfold/open up the net.' (Milner 1966: 231)

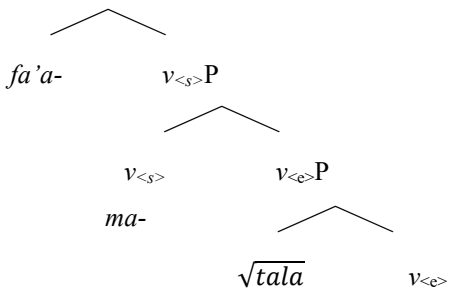
b. *Sā* ***ma-****tala* *le* *faitoto'a.*
PST STAT-open SPEC door.ABS
'The door was opened.'

Crucially, *ma-tala* can be further derived by *fa'a-* to function as a causative predicate that encodes an event that leading to the resulting state of an event denoted by a change-of-state root ('cause to be opened').

(277) *Sā* ***fa'a-ma-****tala* *e* *le* *tama* *le* *faitoto'a.*
PST CAUS-STAT-open ERG SPEC boy SPEC door.ABS
'The boy opened the door' (lit: 'The boy caused the door to be opened.')

Translating the semantics into syntax, *ma-tala* contains at least two eventuality-denoting heads: (i) an eventive *v* introducing a change-of-state event and (ii) an additional stative *v* that embeds the eventive *v*P. Thus, the underlying syntactic structure of the causative is shown in (278) (cf. Dhillon et al. 2009 on Niuean, Embick 2004):

(278)



Second, the anticausative prefix *liu-* that derives anticausative predicates from nominal elements can also occur between *fa'a-* and the root (cf. section 5.2.1; also Mosel &

[69] A detailed analysis of Samoan *ma-* is still pending. Mosel & Hovdhaugen (1992: 737) describe *ma-* as a de-agentivizing prefix that derives stative/anticausative predicates from transitive predicates (also Milner 1966: 116f). Dhillon et al.'s (2009) propose that *ma-* derives resulting states from actions in the closely related Polynesian language Niuean. In section 5.4.3, I propose to analyze *ma-* as the spell-out of *v* in the context of causative manner verbs in absence of Voice. However, for our purposes, the relevant observation is that *ma-* qualifies as categorizing morphology.

Hovdhaugen 1992). In (279), the root *suavai* 'liquid' is prefixed by *liu-* forming the anti-causative predicate *liu-suavai* 'to melt (itr.), to become liquid' (Milner 1966: 108).

(279) a. *Olo'o suavai le ga'o.*
IPFV liquid SPEC fat.ABS
'The fat is liquid.'

b. *Sā* ***liu-****suavai* *le* *ga'o.*
PST ANTICAUS-liquid SPEC fat
'The fat became melted.'

The anticausative predicate can be derived into a causative predicate *fa'a-liu-suavai* 'to melt (tr.), to cause X to become liquid' by *fa'a-*.

(280) *Sā* ***fa'a-liu-****suavai* *e* *le* *teine* *le* *ga'o.*
PST CAUS-ANTICAUS-liquid ERG SPEC girl SPEC fat
'The girl melted the fat.'

Like the verbal stativizer *ma-*, the occurrence of anticausative morphology in between *fa'a-* and the root indicates that *fa'a-* can select for pre-categorized verb stems and supports its classification as a non-root-selecting/productive causative.

5.3.2.2 The absence of idiosyncratic effects

Further evidence that *fa'a-* takes non-root-sized complements comes from the absence of idiosyncrasies. Presupposing that Samoan *fa'a-* is not a single spell-out for both lexical and productive causatives, the presence of *fa'a-* predicts idiosyncratic effects on various levels (cf. Marantz 2013b, 2001).

(i) morphological: Roots may determine specific allomorphs of morphemes that are syntactically adjacent (e.g. Embick 2010, Arad 2003).

(ii) semantic: Root-attachment may cause non-compositional, idiosyncratic semantics, while non-root-attachment is semantically transparent (e.g. Arad 2003, Harley 2008).

(iii) phonological: Only root-attaching affixes may affect the phonological/prosodic structure of the root (e.g. Newell 2008, Marvin 2002).

Most prominently, several cases of morphological allomorphy have been reported in root-selecting causatives (e.g. Harley 2013 on Hiaki, Miyagawa 2012 on Japanese, also English). This is illustrated by Japanese lexical causatives where the spell-out of the causative morpheme is determined by the root class (Jacobsen 1992).

(281)	Class	unaccusative		lexical causative		
a.	*-a-/-e-*	*ag-**ar**-u*	'rise'	*ag-**e**-ru*	'raise'	JAPANESE
b.	*-re-/-s-*	*hazu-**re**-ru*	'come off'	*hazu-**s**-u*	'take off'	
c.	*-ri-/-s-*	*ta-**ri**-u*	'suffice'	*ta-**s**-u*	'add'	
d.	*-e-/-as-*	*kog-**e**-ru*	'become scorched'	*kog-**as**-u*	'scorch'	
e.	*-i-/-os-*	*ok-**i**-ro*	'get up'	*ok-**os**-u*	'wake sb. up'	
f.	*-ø-/-as-*	*nar-**ø**-u*	'ring.INTR'	*nar-**as**-u*	'ring.TR'	
g.	*-ø-/-e-*	*ak-**ø**-u*	'open.INTR'	*ak-**e**-u*	'open.TR'	
h.	*-e-/-ø-*	*kir-**e**-ru*	'be.cut'	*kir-**ø**-u*	'cut'	
i.	*-ar-/-ø-*	*matag-**ar**-u*	'sit astride'	*matag-**ø**-u*	'straddle'	(Miyagawa 2012: 197)

In contrast to lexical causatives in Japanese, there is no potential case of root-determined allomorphy for *fa'a*-causatives (cf. Mosel & Hovdhaugen 1992).

Moreover, *fa'a-* rarely displays idiosyncratic meaning which is described in other categorizing contexts. In contrast to *fa'a-*, the synchronically non-productive causative morpheme *ta-* displays instances of idiosyncratic meaning (282)a/b and derives causatives verbs from non-independently occurring roots (282)c.

(282) a.	*pisa* 'noisy'	→	*ta-pisa*	'to make a sound of revelry'
		→	*fa'a-pisa*	'to make noise'
b.	*lele* 'fly'	→	*ta-lele*	'to blow down by the wind (of fruits).'
		→	*fa'a-lele*	'to make fly'
c.	**lepe* 'break?'	→	*ta-lepe*	'to break up, smash up'
		→	*ma-lepe*	'to be broken up'
		→	*fa'a-ma-lepe*	'to smash, wreck'
		→	**fa'a-lepe*	(Mosel & Hovdhaugen 1992: 188)

In contrast, the nominalizer *-ga* attaches to bases of different sizes (cf. Medeiros 2020 on Hawai'ian *-na*). If *-ga* attaches directly to the root, it alters its phonological structure and the derived noun denotes an idiosyncratic meaning. For example, in (283)c, the root *moe* 'sleep' is derived by *-ga* to *moe-ga* 'bed'. Here, the root is de-diphthongized and the nominalizer is spelled-out in the same p-word as the root (Zuraw et al. 2014, Mosel & Hovdhaugen 1992).

(283) a.	$(moe)_V$	[*v* moe]	'to sleep'	(Zuraw et al. 2014: 34)
b.	$(moe)_N$	[[*v* moe] *n*]	'(the) sleep'	
c.	$mo(eŋa)_N$	[moe *n*]	'bed'	

If *-ga* is attached to already derived stems – shown here with the causative verb *fa'a-lelei* 'make peace' –, the resulting meaning is transparent, and the phonological structure of the root is not affected. In (284)c, a de-diphthongization does not apply to final syllable.

(284) a.	le(leí)	[*v* lelei]	'peaceful'	(Zuraw et al. 2014: 34)
b.	(fàʔa)-le(léi)	[*v* [*v* lelei]]	'make peace'	
c.	(fàʔa)-le(léi)-ŋa	[[*v* [*v* lelei]] *n*]	'peace making'	

Crucially, *fa'a-* never alters the phonological structure of the root and always constitutes its own pword. In (285), a V_iV_i-sequence occurs across the prefix stem boundary. As there are no signs of stress shift, shortening or diphthongization across the morpheme boundary, *fa'a-* does not affect the pword of the root/stem (Zuraw et al. 2014).

(285) a.	(ào)(ŋá:)	'be useful'	(Zuraw et al. 2014: 29)
b.	(fáʔa)-(ào)(ŋá:)	'to use'	
c.	*fa(ʔà:)o(ŋá:)		
d.	*fa(ʔào)(ŋá:)		

In short, *fa'a*-causatives do not show idiosyncratic effects with regard to morphology, phonology or semantics. As such idiosyncrasies would have been expected for root-selecting/lexical causatives, *fa'a*-causatives are instances of productive causatives.

5.3.2.3 Pseudo noun incorporation

Further evidence that *fa'a-* takes non-root-complements comes from pseudo noun incorporation (PNI). As discussed in section 5.2.2.2, PNI solely applies to the internal argument, but not to oblique or external arguments (Tollan 2018, Collins 2017, also Baker 2014, Massam 2001). Therefore, the ability of an argument to undergo PNI indicates its structural position as the complement of the verb. In *fa'a*-causatives, the objects of embedded unaccusative verbs can be PNI-ed, while the objects of embedded unergative verbs cannot (Collins 2017). In (286), PNI of the embedded object *i'a* 'fish' is grammatical in the context of the causativized form of the unaccusative verb *leaga* 'bad'.

(286) a. *E fa'a-leaga e le tamaloa* ***le i'a***
PRS CAUS-bad ERG SPEC man SPEC fish.ABS
'The man spoils the fish.'

b. *E fa'a-leaga* ***i'a*** *le tamaloa.* PNI
PRS CAUS-bad fish SPEC man
'The man spoils fish.' (Collins 2010: 100)

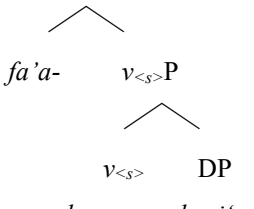
In contrast, causatives from unergative verbs (here: *pese* 'sing') reject PNI (287).

(287) a. *E fa'a-pese e le fafine **le manu.***
PRS CAUS-sing ERG SPEC woman SPEC bird
'The woman made the bird sing.'

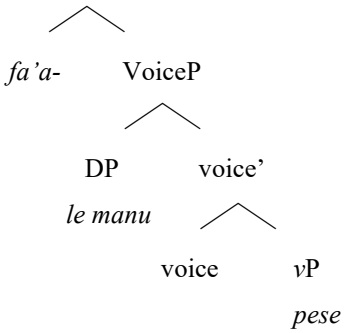
b. * *E fa'a-pese **manu** le fafine.* *PNI
PRS CAUS-sing bird SPEC woman
Intended: "The woman made birds sing.' (Collins 2017: 42)

This pattern suggests that the argument structure of the embedded verb is preserved under *fa'a-*. While the object of an causativized unaccusative verb is the internal argument of the embedded verb (288)a, the object of an causativized unergative verb is the embedded external argument (288)b. In the next section, I provide further support for this assumption.

(288) a.



b.



5.3.2.4 Combinatorial restrictions

Additional support for the phase-selecting properties of *fa'a*-causatives comes from the combinatorial restrictions of *fa'a-* with respect to the verb classes. Tollan (2018) observes that *fa'a-* can derive causative predicates from unaccusative, unergative and ABS-OBL middle predicates, but not from ERG-ABS ergative predicates (also Read 2010, Mosel & Hovdhaugen 1992). In the following, I show that this restriction arise from the specific licensing pattern in syntactic ergative language like Samoan.

Below, *fa'a-* is attached to unaccusative verbs to form a causative variant. Note that the newly introduced agent is marked by ergative case and the object by absolutive case.

(289) a. *Sā mamā le laulau.* STATIVE UNACCUSATIVES
PST clean SPEC table.ABS
'The table was clean.'

b. *'ua* ***fa'a-****mamā* *e* *Pita* *le* *laulau*
INCH CAUS-clean ERG Peter SPEC table.ABS
'Peter cleaned the table.'

(290) a. *Sā* *puna* *le* *vai.* DYNAMIC UNACCUSATIVES
PST boil SPEC water.ABS
'The water boiled'

b. *Sā* ***fa'a-****puna* *e* *le* *teine* *le* *vai.*
PST CAUS-boil ERG SPEC girl SPEC water.ABS
'The girl boiled the water.'(Read 2010: 16f)

In (291), *fa'a-* is attached to an unergative predicate. Here, the newly introduced agent of the causing event is marked by ergative case and the causee by absolutive case.

(291) a. *Sā* *siva* *le* *tama.* UNERGATIVES
PST dance SPEC boy.ABS
'The boy danced.'

b. *Sā* ***fa'a-****siva* *e* *le* *tamāloa* *le* *teine.*
PST CAUS-dance ERG SPEC man SPEC girl.ABS
'The man made the woman dance.' (Tollan 2018: 27)

Additionally, *fa'a-* can attach to middle predicates and turn them into ditransitive causatives. Again, the newly introduced external argument receives ergative case, while the embedded arguments preserve their oblique case alignment.

(292) a. *Sā* *mana'o* *le* *teine* *i* *le* *masi.* MIDDLES
PST want SPEC girl.ABS OBL SPEC cookie
'The girl wanted the cookie.'

b. *Sā* *fa'a-mana'o* *e* *le* *tama* *le* *teine* *i* *le* *masi.*
PST CAUS-want ERG SPEC boy SPEC girl.ABS OBL SPEC cookie
'The boy made the girl want the cookie.' (Tollan 2018: 28)

In contrast, *fa'a-* is unable to prefix transitive ERG-ABS predicates that introduce a PP-subject. This is highlighted in (293) by *fau* 'build' that rejects *fa'a-*prefixation.

(293) a. *Sā* *fau* *e* *le* *tamāloa* *le* *fale.* TRANSITIVES
PST built ERG SPEC man SPEC house.ABS
'The man built the house.'

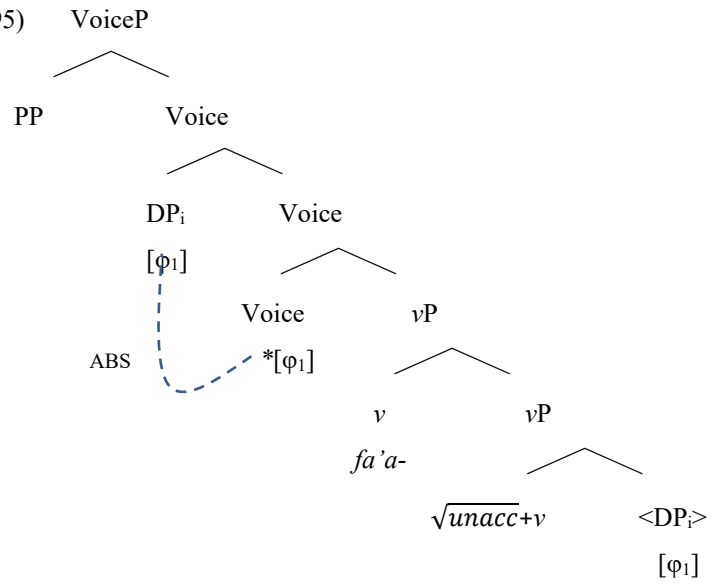
b. * *Sā fa'a-fau e le tama (e) le tamāloa i le fale.*
PST CAUS-build ERG SPEC boy ERG SPEC man.ABS OBL SPEC house
Intended: 'The boy made the man build the house.' (Tollan 2018: 35)

Instead, the intended meaning has to be expressed by a bi-clausal construction embedded under the verbs *fa'aoso* 'to compel' or *fai* 'to make' (294).

(294) *Na fai e le tama le tamāloa e fau le fale.*
PST make ERG SPEC boy SPEC man.ABS PRS build SPEC house.ABS
'The boy made the man build the house.' (Read 2010: 13)

The combinatorial constraints on *fa'a-* resemble split-ergativity in Samoan (see section 5.2.3). Below, I demonstrate that the ungrammaticality of a causativization of ergative verbs follows from the presence of a lower Voice head that introduces a Phase boundary (but see Hopperdietzel to appear for an alternative analysis based on Tollan 2018). By the assumption that only the Voice head in a clause inherits its licensing feature from T, an embedded Voice head in Samoan cannot function as a nominal licenser (cf. Nie 2020). In the structure of causativize unaccusatives, the licensing mechanism is not affected as the embedded *v*P does not constitutes its own phase, as it is dominated by a Voice head in the derivation, which licenses the embedded internal argument.

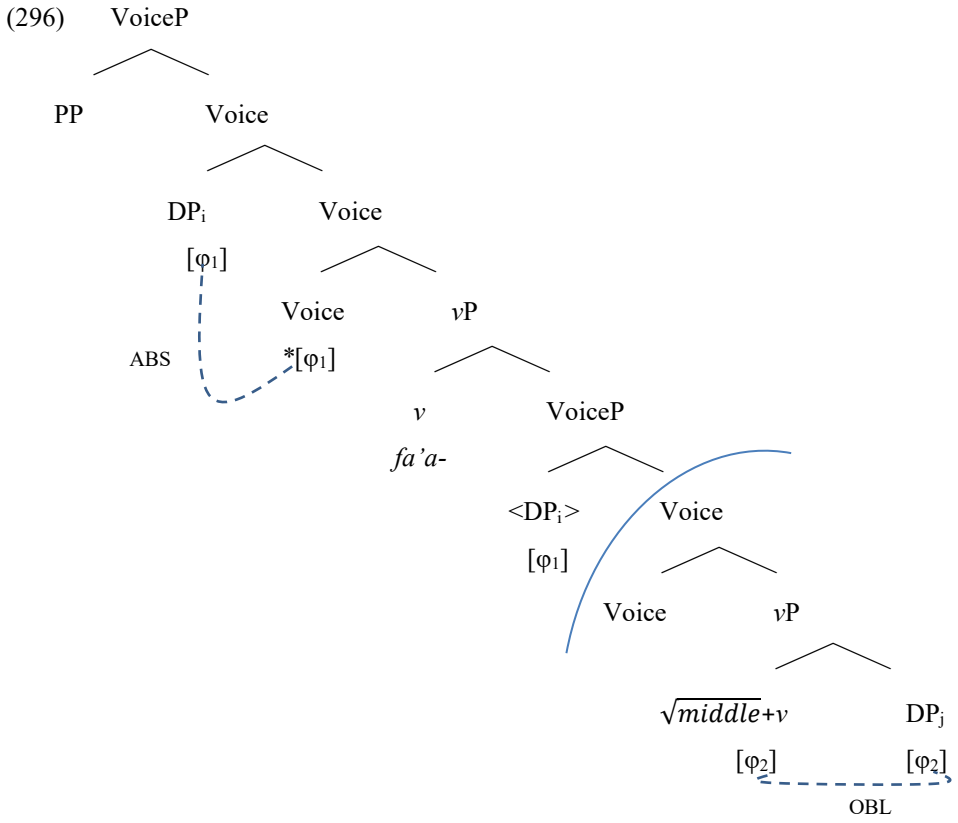
(295)



This contrasts with causatives derived from unergative, middle and ergative verbs. Here, the embedded verb contains a Voice head, which demarks a phase boundary, but does not carry licensing features, as it is not the closest head to T. However, as the external argument DP of the embedded unergative or middle verb is merged in Spec, VoiceP, it is visible for licensing and extraction. Thus, the higher Voice head license the embedded

external argument and moves it to its specifier position. As the internal argument is already licensed by *v*, the derivation does not crash as all DP-arguments are licensed.

(296)



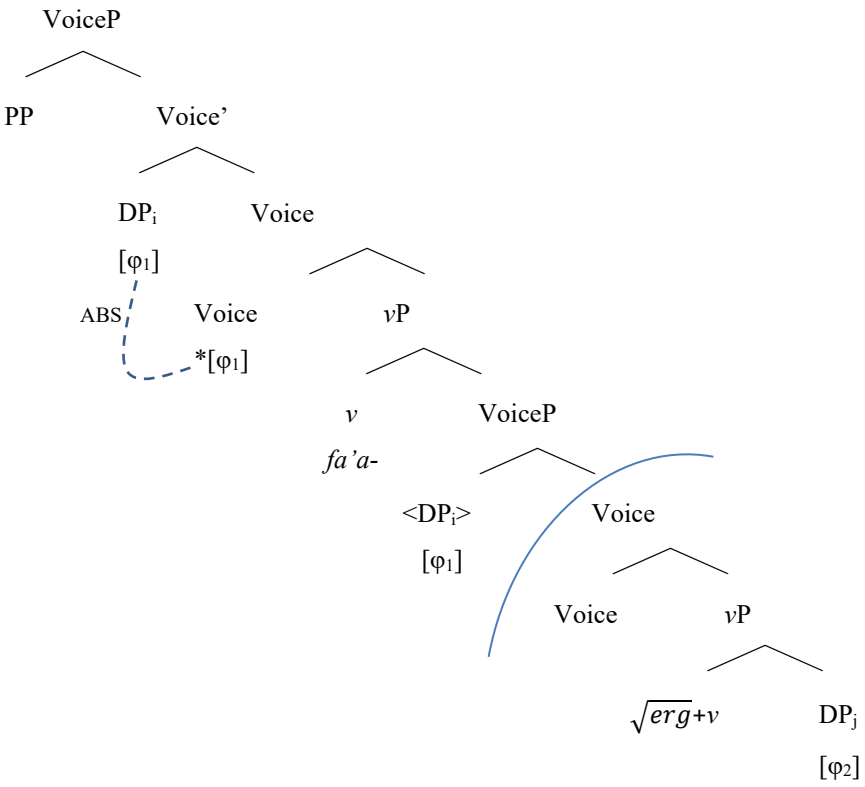
In contrast, if *fa'a-* merges with ergative verbs the internal argument is in a position that is not accessible for the licensing higher Voice head. By the assumption that the object must raise to Spec, VoiceP to be licensed, the internal argument would need to move to the specifier of the embedded VoiceP. But as this Voice head does not have a strong *φ*-features nor independently motivated EPP-feature, the internal argument stays in situ where it is invisible for licensing which results in the ungrammaticality of the construction. [70]

[70] This contrasts with causatives in other Polynesian languages. For example, Gould et al. (2009) observe that transitive ergative verbs can be causativized by the cognate causative prefix *faka-* to form ditransitive causatives in the related morphological ergative language Niuean. In this construction, the external argument is located *v*P-internally with the former internal argument introduced by the applicative head *aki* (i) (cf. Kim 2011 for applicatives introducing the embedded external argument in Korean).

(i) a. *Ne totō e ia e kapiniu.* b. *Kua faka-totō aki e ia e kato e tama.* N.
PSThold ERG 3.SG ABS cup PERF CAUS-holdAPPL ERG 3SG ABS basket ABS child
'He held the cup (in his hands).' 'She made (my) child hold the basket.' (Massam 2009b: 127)

However, Samoan lacks such kind of applicative constructions even outside of causatives (Mosel & Hovdhaugen 1992, cf. Margetts 2007 for an overview of ditransitivity in Oceanic). In Samoan, applicatives involve either oblique *i*-case or the benefactive preposition *ma* or the directional particle *mai,* but none of it can be used to introduce the external argument of an embedded ergative verb. The absence of such morphology also indicates that embedded unergative and middle arguments are introduced by VoiceP as they are marked by absolutive case (cf. Pylkkänen 2008).

(297) *



In sum, the absence of causativized ergatives supports the hypothesis that *fa'a*-causatives are Voice-selecting causatives that always select the highest verbal projection of a verb: (a) *v*P in unaccusatives and (b) VoiceP in unergatives and middles.

5.3.3 Voice-bundling

Turning to Voice-bundling, this section reveals that *fa'a*-causatives exhibit a 'bundling paradox', in showing characteristics of both bundling and non-bundling causatives. Evidence for the 'bundling paradox' comes from (i) anticausative predicates, (ii) non-volitional causers and (iii) passivization.

5.3.3.1 Anticausatives

Deriving transitive causatives from intransitive verbs and ditransitive causatives from transitive 'middle' verbs, *fa'a-* necessarily introduces an external argument marked by ergative case. In (298), the stative unaccusative predicate *malū* 'soft' is derived by *fa'a-* to form the causative predicate *fa'a-malū* 'to soften' which also introduces the ergative marked external argument *e le tama* 'the boy'.

(298) a. *Sā malū le mea ai.*
PST soft SPEC food.ABS
'The food softened.'

b. *Sā* ***fa'a****-malū* *e* *le* *tama* *le* *mea ai.*
PST CAUS-soft ERG SPEC boy SPEC food.ABS
'The boy softened the food.'

In contrast, it is not possible to add a causer argument to the bare stative verb to form a causative predicate without *fa'a-*. As such, an agentive argument in causative contexts requires the presence of the causative morpheme.

(299) * *Sā* *malū* *e* *le* *tama* *le* *mea ai.*
PST soft ERG SPEC boy SPEC food.ABS
Intended: 'The boy softened the food.'

Likewise, the presence of *fa'a-* necessarily implies an agent with a high degree of volition, deliberateness and intentionality (Read 2010). As Samoan is a pro-drop language, *fa'a-*causatives without an overtly realized external argument are possible (Koopman 2012, Mosel & Hovdhaugen 1992). Therefore, clauses such as those in (300) do not allow for an anticausative interpretation but entail an implicit agent.

(300) a. *Sā* *fa'a-malū* *le* *mea ai.*
PST CAUS-soft SPEC food.ABS
'Someone softened the food.'
Intended: 'The food softened'/'The food was softened.'

b. *Sā* *fa'a-mana'o* *le* *teine* *i* *le* *masi.*
PST CAUS-want SPEC girl.ABS OBL SPEC cookie
'Someone made the girl want the cookie.
Intended: 'The girl was caused to want the cookie.'

Therefore, Samoan *fa'a*-causatives differ from *tu'i*-causatives in Chemehuevi (273) or English lexical causatives, which can have an anticausative reading (Serratos 2008, Pylkkänen 2008). According to this diagnostic, Samoan *fa'a*-causatives show instances of Voice-bundling as causative morphology obligatorily requires an external argument.

5.3.3.2 Non-volitional (natural) causers

Further evidence for classifying *fa'a*-causatives as Voice-bundling causatives comes from constructions with non-volitional (natural) causers that do not show causative morphology on the verb. In Samoan, ergative marked agentive causers are understood to act with a high degree of volition and deliberateness. Therefore, non-volitional (natural)

causers cannot be merged in this position as they do not fulfill the requirement for ergative marked subjects (cf. section 5.2.2.3; Tollan 2018).

(301) a. *Sā* ***fa'a-****mamā* *e* *le* *teine* *le* *laulau.*
PST CAUS-clean ERG SPEC girl SPEC table.ABS
'The girl cleaned the table.'

b. # *Sā* ***fa'a-****mamā* *e* *le* *matagi* *le* *laulau.*
PST CAUS-clean ERG SPEC wind SPEC table.ABS
Intended: 'The wind cleaned the table.'

Instead, non-volitional (natural) causers must be introduced by the general preposition *i.*[71] Crucially, this construction lacks the causative morpheme and the predicate occurs in its underived stative/anticausative form (see also Koopman 2012).

(302) *Sā* *mamā* *le* *laulau* *i* *le* *matagi.*
PST clean SPEC table.ABS OBL SPEC wind
'The wind cleaned the table.'/'The table became cleaned from the wind.'

As discussed in section 2.3, causer PPs are introduced as *v*P-internal modifiers without a Voice-layer. Therefore, the absence of *fa'a-* correlates with the absence of Voice in causatives within the context of non-volitional (natural) causers – a pattern predicted for Voice-bundling causatives.

5.3.3.3 Passivization

A third diagnostic for Voice-bundling comes from the interaction of causative morphology with Voice-related morphology such as passives. As discussed in section 5.3.1, passive and causative morphology should be in complementary distribution in Voice-bundling languages (Harley 2017, Pylkkänen 2008). As identified in Samoan, the suffix -C*ia* derives impersonal passives from ergative transitive verbs (Koopman 2012, Cook 1996).

[71] In Samoan, the preposition/case marker *i* introduces oblique arguments of various thematic roles such as place, source, origin, direction, goal and cause (Mosel & Hovdhaugen 1992). Therefore, it is unlikely that *i* itself carries change-of-state semantics when it introduces the non-volitional causer in the absence of causative morphology or the inchoative aspect marker *'ua*. In light of an ongoing discussion on the locus of inchoative semantics in the context of the stative/inchoative alternation in Polynesian languages, example (302) suggests that inchoative semantics is already encoded at the lexical level in Samoan, and not solely introduced by the inchoative aspect marker *'ua* or pragmatically coerced (cf. Hohaus 2016, Matthewson et al. 2015, Koontz-Garboden 2007a).

This is shown in (303) where the transitive ergative verb *ta* 'hit' is suffixed by the passive morpheme –C*ia* and receives an impersonal passive interpretation.[72]

(303) a. *'ua na ta=ina a'u i le la'au.*
INCH 3SG.PRON strike-RSMP 1SG.PRON.ABS OBL SPEC stick
'He struck me with a stick.' (Milner 1966: 220)

b. *Sā* ***ta-ia*** *Rosy i le ta'avale.*
PST strike-PASS Rosy.ABS OBL SPEC car
'Rosy got hit by a car.' (Mosel & Hovdhaugen 1992: 739)

fa'a-causatives can also be passivized by –C*ia*. In (304)b, the unaccusative predicate *tumu* 'be.full' is derived by *fa'a-* to the causative verb *fa'a-tumu* 'cause to be full, fill'.

(304) a. *'ua tumu le ipu i vai.*
INCH full SPEC cup OBL water
'The cup was full of water.'

b. ***Fa'a-****tumu le pakete.*
CAUS-full SPEC bucket
'Fill the bucket.' (Milner 1966: 287)

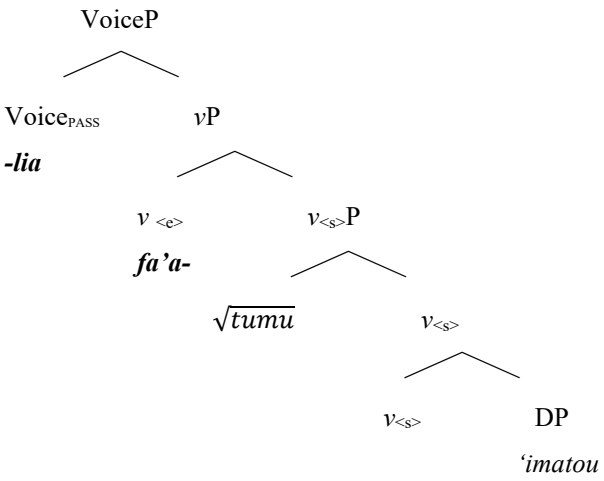
As shown in (305), the derived causative can be further passivized by -C*ia.*

(305) *'ua* ***fa'a-****tumu****-lia*** *'imatou i le fiafia.*
INCH CAUS-full-PASS 1PL OBL SPEC happiness
'We are filled with joy.' (Milner 1966: 288)

The co-occurrence of causative and passive morphology is not expected in a Voice-bundling language as causative morphology and Voice are bundled into a single head. Consequently, the independent presence of passive and causative morphology questions the Voice-bundling status of Samoan *fa'a*-causatives. Instead, *-(C)ia* and *fa'a-* realize separate heads.

[72] Note that the *-(C)ia*-morpheme has two distinct functions in Samoan depending on the morphosyntactic context. On the one hand, it derives impersonal passives from transitive ergative verbs. Here, *-(C)ia* spells out passive Voice – in other contexts it derives ergative verbs from middle predicates (see section 5.2.2.3).

(306)



In sum, *fa'a*-causatives show an inconsistent behavior according to Voice-bundling diagnostics. While the presence of *fa'a-* appears to correlate with the introduction of agentive external arguments, as predicted for Voice-bundling causatives, the co-occurrence of Voice-related morphology strongly suggests a non-bundling analysis.

5.3.4 Marked causatives as Voice-driven allomorphy

The investigation into selectional and bundling properties reveals that Samoan *fa'a*-causatives select for VoiceP complements with the limitation of agentive Voice$_{AGENT}$ projections. As a result, unergative and transitive middle verbs but not transitive ergative verbs can be causativized by *fa'a-*. With regard to the Voice-bundling parameter, *fa'a*-causatives show conflicting evidence for both Voice-bundling and Voice-non-bundling. On the one hand, *fa'a*-causatives obligate the introduction of an agentive causer and cannot be used as anticausatives or with non-agentive (natural) causers. These restrictions speak in favor of a Voice-bundling analysis (see Table 6). On the other hand, it is possible to passivize *fa'a*-causatives with the passivizing suffix *-(C)ia*. As such, *fa'a-* is patterned with other non-Voice-bundling causatives. Therefore, Samoan *fa'a*-causatives present a bundling paradox in that they show features of both Voice-bundling and non-Voice-bundling languages (see Thomas 2019 for similar observations in Mbyá *mo*-causatives). [73]

Under a configurational approach to causativity as outlined in section 2.2.4, causative morphology can be interpreted as the contextually determined spell-out of an event-

[73] Note that the 'bundling paradox' only arises if bundling is interpreted as the actual fusion of two adjacent heads. If 'bundling' were interpreted as selection or adjacency restrictions, Voice and causative morphology could co-occur (Harley 2017). Then, an additional explanation would be needed to account for the pattern in traditional Voice-bundling languages such as Chuj, which exhibit a single spell-out for both causatives and passives (compare section 5.3.1). Another potential way of analyzing the data may involve a spanning approach in which *fa'a-* spells out Voice and *v* together in the active use, but separate in the passive use (Thomas 2019, Haugen & Siddiqi 2016, Merchant 2015, Svenonius 2012, Ramchand 2008).

introducing *v* head in an appropriate syntactic environment (Wood & Marantz 2017 on Japanese, Alexiadou et al. 2015 on English, Wood 2011 on Icelandic, cf. Embick 2009). Therefore, cross-linguistic variation is predicted from different contexts that trigger language-specific allomorphy of *v*. In languages that exhibit root-selecting (lexical) causatives, causative morphology may be subject to contextual allomorphy determined by root classes. English, for example, exhibits different realizations of causative morphology depending on the embedded root (Embick 2004, Levin 1993) – see also example (281) for larger inventory of root-determined allomorphy in Japanese (Miyagawa 2012, Harley 2008, Jacobsen 1992).

(307) [$v_{<e>}$] ↔ -en / [$_{vP}$ ___ $ResP_{<s>}$] {red, flat, wide, … ENGLISH
↔ -ø- / [$_{vP}$ ___ $ResP_{<s>}$] {melt, dry, break, …
…

Moreover, Wood (2011) argues that causative morphology in periphrastic causatives can also be treated as a contextually determined spell-out. Therefore, in Iceland periphrastic *láta*-causatives, the bare eventive *v* head is spelled-out as *láta* in a causative configuration if it embeds a VoiceP. In a non-causative contexts, the same head gets a different spell-out – for example, *géra* 'make' in the context of a DP-complement.

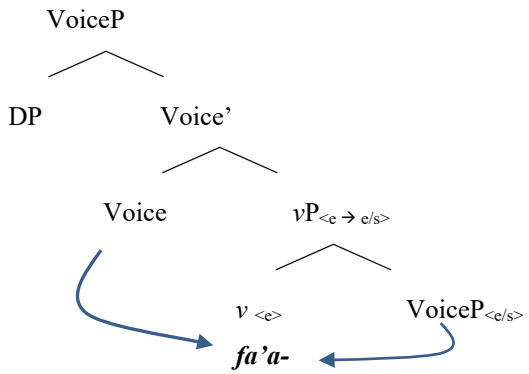
(308) [$v_{<e>}$] ↔ *lát* / [$_{vP}$ ___ $VoiceP_{<e/s>}$] ICELANDIC
↔ *ger* / [$_{vP}$ ___ DP]
…

A different case is represented by Hiaki which shows two different morphological realizations for productive *v*P-selecting and VoiceP-selecting causatives (Harley 2013). Again, the size of the syntactic type of the complement determines the spell-out of *v*: in the context of a VoiceP, the spell-out is *-tua*; in the context of a *v*P, the spell-out is *–tevo*.

(309) [$v_{<e>}$] ↔ *-tua* / [$_{vP}$ ___ $VoiceP_{<e>}$] HIAKI
↔ *-tevo* / [$_{vP}$ ___ $vP_{<e/s>}$]
…

However, mono-directional allomorphy along the lines of English, Icelandic, or Hiaki, does not account for the Samoan data. While in those languages, causative morphology is solely determined by morphosyntactic features of the complement, Samoan *fa'a*-causatives are additionally sensitive to the presence of a higher agentive Voice head. To account for this observation, I propose that the spell-out of *v* in a causative configuration is determined not only by its complement, but additionally by its adjacent agentive Voice.

(310)



Therefore, *fa'a-* is the spell-out of an eventive *v* head that embeds a *v*P in the presence of a Voice. Only the combination of both conditions triggers the causative allomorph to be realized at PF. In contrast, if Voice is not present (e.g. in the case of a non-volitional (natural) causer), the head remains silent as the spell-out conditions for *fa'a-* are not met.[74]

(311) $[v_{<e>}]$ ↔ *fa'a-* / $[_{\text{VoiceP}}$ Voice $[_{v\text{P}}$ ___ $v\text{P}_{<e/s>}]]$
↔ ø
…

As both conditions are located within the same spell-out domain without intervening morphology, bi-directional sensitivity as presented in (311) is in line with general assumptions on contextual allomorphy in current research (Moskal 2015, Bobaljik 2012, Embick 2010; see sections 6.3.2.2 and 8.2.2.3 for a more detailed discussion).[75]

The benefits of the analysis presented here are that Voice and *v* are tied together for the morphological realization of the causing event-introducing *v* head by contextual spell-out rules, while being independently represented in the syntactic derivarion. Accordingly, the bundling paradox in Samoan is in line with the configuration in (311) as Voice-morphology and the causative prefix *fa'a-* are able to co-occur.

5.4 Manner/result complementarity in Samoan

This section takes a closer look at the argument and event structure of Samoan verbal predicates, with a focus on the distribution of manner and result meaning components. As

[74] In its similative use, *fa'a-* seems to spell-out a stative *v* that selects for nominal DP/NP complements. Thus, the prefix *fa'a-* is the spell-out of distinct *v* heads in designated configurations (cf. FN72 on the various functions of the -(C)*ia* that spells out different functions of Voice dependent on its complement).
[75] Similar intuitions can be found in Wood & Marantz (2017) on Japanese adversity causatives and Alexiadou et al. (2015) on Japanese and Hindi causatives. In general, this analysis can also be externed to marked to languages that mark both the anticausative and causative variant by designated morphology (e.g. Japanese in (281) or Korean (274). Under the present analysis, anticausative morphology can be interpreted as the spell-out of *v* in causative configuration in the absence of Voice, instead of bundling the features of Voice and *v* together to a single head.

demonstrated in chapter 2, manner and result meaning are expected to be in complementary distribution, as a single root can only modify one meaning component at a time (cf. manner/result complementarity; Rappaport Hovav & Levin 2010). To investigate the distribution of manner and result components, I apply the diagnostics discussed in section 2.2, in the context of English, to Samoan verbs (based on Alexiadou et al. 2017, Beavers & Koontz-Garboden 2012, Rappaport Hovav & Levin 2010). The results of this study support the cross-linguistic assumption of manner/result complementarity in Samoan, in that a single root denotes either the manner of a (causing) action or its result state (cf. Gast et al. 2014 for an Oceanic perspective, Næss & Boerger 2008 on Äiwoo). Based on the interaction of meaning components and event structure, three general verb classes can be identified: (i) proto-typical manner verbs, (ii) causative manner verbs and (iii) causative result verbs. The significant observation is that Samoan appears to lack non-derived causative result verbs. Instead, causative verbs are obligatorily derived by the causative *fa'a-* or other morphosyntactic mechanisms (e.g. reduplication). Unlike English, Samoan show verbs specific constraints on their argument structure, as they reject subject or object deletion even in manner and causative contexts. Therefore, the findings of this case study highlight the necessity of a language specific analysis of the event and argument structure of verbal predicates in the context of resultative predication.

As the investigation of lexical semantics in understudied languages can be challenging in field work contexts (cf. Matthewson 2004), the present study focuses on a rather small set of verbs that have been attested to naturally occur in Samoan Type-B-RSVCs (see section 1.2 for a detailed description of the methodology used in this thesis). Most verbs come from either the domain of *wash*-verbs, such as *ta* 'wash', *fulu* 'wash' or *solo* 'wipe', as well as *cut-and-break*-verbs (also: verbs of *disintegration*), such as *tipi* 'cut', *fa'ī* 'break off' or *'oti* 'cut', of which the latter especially has been discussed extensively in current research, in the context of change-of-state semantics (cf. Beavers & Koontz-Garboden 2020, Gast et al. 2014, Levin & Rappaport Hovav 2013, Kroeger 2010, Embick 2009, Næss & Boerger 2008, Bohnemeyer 2007, Fillmore 1970 on cut-&-break verbs, Anagnostopoulou 2017, Alexiadou et al. 2017, Alexiadou & Anagnostopoulou 2013, Levin & Rappaport Hovav 2014 on wash-verbs). Regarding causative verbs, I have only included *fa'a*-causatives as other types of derived causative verbs do not occur in the context of Type-B-RSVCs.

5.4.1 Manner diagnostics

At first, I apply the diagnostics that have been identified to be sensitive to the presence of a manner component in the event structure of verbal predicates. This includes (a) combinatorial restrictions with instruments, (b) combinatorial restrictions with external arguments, and (c) the deletion of the internal argument. In section 2.2.1, these diagnostics have been discussed in detail, which is why I will briefly recapitulate their predictions here. As this study shows, some diagnostics are not applicable, due to the language specific properties of Samoan.

5.4.1.1 Combinatorial restrictions with instruments

A first diagnostic builds on the interaction of manner and result verbs with instrumental modification. As shown in section 2.2.1.1., instrumental modifiers are more restricted in the context of manner verbs, as the root denotes the action of an event with which the instrumental modifier must be compatible. In contrast, result verbs exhibit a greater flexibility as long as the instrument can interpreted as being involved in an event that causes the result state denoted by the root (cf. Anagnostopoulou 2017, Levin & Rappaport Hovav 2011).

In the context of Samoan *wash*-verbs, all monomorphemic verbs appear to have a manner component. Therefore, the root specifies either the manner of, or the instrument used in, an action that is performed by an agent. Some verbs, such as *solo* 'wipe' (312)c or *salu* 'broom' (312)e have underived instrumental nominal forms.

(312) a. *tā* 'wash (traditional way of washing clothes by hitting them with a stick)'
b. *fulu* 'wash (with water and soap)'
c. *solo* 'wipe with a hand/cloth/towel' → *solo* 'cloth, towel'
d. *tafi* 'brush (off), rub (off), clear'
e. *salu* 'swipe → *salu* 'broom'

For example, the transitive verb *solo* 'wipe' roughly denotes a 'wiping'-action with a fabric or the hand, performed by an agent on a surface. Only instruments that are compatible with this manner, such as a t-shirt or a cloth, can be used as instrumental modifiers.

(313) *Sā solo e Pita le laulau* ***i le solo / t-shirt / # salu***.
PST wipe ERG Pita SPEC table.ABS OBL SPEC towel t-shirt broom
'Peter wiped the table with a cloth/ a t-shirt/ # a broom.'

The same observation holds true for monomorphemic cut-&-break-verbs, which is an unexpected cross-linguistic observation (cf. Majid & Bowermann (eds.) 2007, Bohnemeyer 2007, Guerssel et al. 1985). For example, *cut*-verbs like *ʻoti* 'cut (with scissors)' and *soni* 'cut (with knife)' denote an action that presupposes the use of a specific instrument (here: scissors or knives respectively).

(314) a. *ta* 'hack, chop (with an axe/blade)'
b. *ʻoti* 'cut (with scissors)' → *ʻoti* 'scissors'
c. *soni* 'cut (with a knife)'
d. *tipi* 'slice (with a knife)'
e. *fa'ī* 'pick, pluck, break off (with hand)'
f. *ʻili* 'saw' → *ʻili* 'saw'
g. *to'i* 'split' → *to'i* 'axe'

Again, all verbs in (314) are sensitive to instrumental modification by only combining with instruments that are compatible with the action denoted by the verb (315).

(315) *Sa ta e Malia le la'au* ***i le to'i / # 'ili***
PST hack ERG Maria SPEC tree.ABS OBL SPEC axe saw
'Maria chopped the tree with an axe/ # a saw.'

As many verbs in the wash- and cut-&-break-domain have nominal counterparts that denote the instrument used in the action, these verbs can be classified as instrumental verbs, which are derived by an instrumental root. Crucially, instrumental roots have been linked to manner modification, in line with the findings in Samoan (cf. Anagnostopoulou 2017, Harley & Haugen 2007, Harley 2005, Kiparsky 1997).

While all monomorphemic verbs have a manner component, *fa'a*-causatives do not specify the causing action that leads to the result state, which is denoted by the stative PC verb or the anticausative verbs. Therefore, causative verbs like *fa'a-mamā* 'to clean' or *fa'a-pa'ū* 'fell' combine freely with all type of instrumental modifiers (316).

(316) a. *Sā fa'a-mamā e Pita le laulau* ***i le solo / satu.***
PST CAUS-clean ERG Pita SPEC table.ABS OBL SPEC towel broom
'Peter cleaned the table with the towel/the broom/ water.'

b. *Sā fa'a-pa'ū e Pita le la'au* ***i le 'ili / to'i.***
PST CAUS-fall ERG Pita SPEC tree OBL SPEC saw axe
'Peter fell the tree with the saw/axe/a push.'

In summary, the distribution of combinatorial restrictions on instrumental modification suggests that all monomorphemic verbs in Samoan have a manner component. In contrast, *fa'a*-causatives leave the manner of the entailed causing event underspecified.

5.4.1.2 Combinatorial restrictions on external arguments

A second diagnostic comes from combinatorial restrictions on different types of external arguments, such as agents, causers or instruments. As discussed in section 2.2.1.2, mono-eventive manner verbs are typically restricted to combine with agent arguments alone, whereas bi-eventive causative verbs have been shown to be more flexible, by also permitting natural causers, e.g. natural forces, or instruments, to merge as the external argument of the verb (Beavers & Koontz-Garboden 2012, Alexiadou et al. 2015, Rappaport Hovav & Levin 2010).

In sections 5.2.2.3 and 5.3.3.1, I have demonstrated that in Samoan, the external argument role is determined by the root class. Regarding transitive verbs, ergative verbs solely combine with agents, but never with causer or instrumental arguments (cf. Collins to appear, Tollan 2018, Blume 1998). This observation holds true for monomorphemic verbs in both the wash and the cut-&-break domain, as these verbs cannot combine with causer or instrumental external arguments.[76]

(317) a. # *Sā solo e le matagi / solo le laulau.* CAUSER
PST wipe ERG SPEC wind cloth SPEC table.ABS
Intended: 'The wind wiped the table.'

b. # *Sā tipi e le naifi le fasipovi.* INSTRUMENT
PST cut ERG SPEC knife SPEC meat.ABS
Intended: 'The knife cut the meat.' (Collins to appear: 11)

However, as we have seen in section 5.3, this restriction also holds for *fa'a*-causatives which obligatorily introduce an agentive external argument and are unable to combine with non-volitional causers or instruments.

(318) a. # *Sā fa'a-mamā e le matagi le laulau* CAUSER
PST CAUS-clean ERG SPEC wind SPEC table.ABS
Intended: 'The wind cleaned the table.'

[76] Collins (to appear) provides some examples in which non-volitional natural causers or instruments may function as the ergative marked subject of a transitive verb, which are not acceptable to all speakers (also Mosel & Hovdhaugen 1992). However, my informants suggested that the causer/instrument subject receives an agent-like/personification interpretation if combined with the verbs discussed here.

b. # *Sā fa'a-pa'ū e le to'i le la'au.* INSTRUMENT
PST CAUS-fall ERG SPEC axe SPEC tree.ABS
Intended: 'The axe fell the tree.'

Instead, non-volitional causers must be introduced as oblique arguments with the verb appearing in its underived stative/anticausative form.

(319) *Sā mamā le laulau i le matagi* CAUSER
PST clean SPEC table.ABS OBL SPEC wind
'The wind cleaned the table.' (Lit. 'The table cleaned from the wind.')

In contrast, oblique causer arguments are also incompatible with monomorphic verbs (but see section 5.3.3.1 for a subclass of causative manner verbs which allow oblique causer arguments when they are derived by the stative/anticausative prefix *ma-*).

(320) # *Sā solo le laulau i le matagi* CAUSER
PST wipe SPEC table.ABS OBL SPEC wind
Intended: 'The wind wiped the table.' (Lit. 'The table got wiped from the wind.')
Instead: '(Someone wiped the table in the wind/ while it was windy')

As a result, combinatorial restrictions of external arguments do not discriminate manner from causative result verbs in Samoan, as both types of verbs necessarily combine with agentive external arguments.

5.4.1.3 Deletion of the internal argument

A third diagnostic comes from the deletion of the internal argument, which, in that only transitive mono-eventive manner verbs are expected to allow the deletion, has been shown to be sensitive to the event structure of verbal predicates, (see section 2.2.1.3). In the context of bi-eventive causative verbs, the deletion of the internal argument violates the *argument-per-subevent* condition, as the deletion of the internal argument would leave the result state without an argument (Levin & Rappaport Hovav 2001, Wittek 2011, Beavers & Koontz-Garboden 2012).

Due to the fact that Samoan is an object drop language and exhibits object drop of 3rd person arguments, this diagnostic is rather difficult to apply (cf. Muāgututi'a 2017, Homer 2009, Mosel & Hovdhaugen 1992). However, as Samoan exhibits ergative case marking, the structural presence of an internal argument in the syntax influences the case marking on the external argument. Therefore, if the internal argument is deleted, the external argument is expected to receive absolutive case instead of ergative case (cf. PNI in

section 5.2.2.2, Mittwoch 2005: FN4). This prediction presupposes that the deletion of internal arguments differs from *pro*-drop in the syntactic projection of an internal argument. While a deleted internal argument is not syntactically projected and the verb's argument role is saturated by existential closure, in the case of *pro*-drop, a silent *pro* argument is merged in the internal argument (cf. Dvořáková 2017, Alexiadou et al. 2014a, Chung & Ladusaw 2004).[77]

This prediction is not borne out by the data. Even in contexts that facilitate object drop in English, the subject is obligatorily marked by ergative case, although the object is not overtly realized.[78] In general, speakers tend to prefer a specific/definite interpretation of the dropped object, linked to an entity that has been previously mentioned in discourse (also Massam et al. 2012 on the dispreference of generic null objects in Niuean).

(321) a. A boy works at a service company. Today, he was called to a big house which he had to clean. Here is what he did all day:
Sā solo e le tama / # le tama (fa'amalama).
PST wipe ERG SPEC boy / SPEC boy.ABS all.day
'The boy wiped (the house/something in the house) (the whole day).'

b. A girl works in a kitchen of a restaurant. Today, she was in charge of the vegetables. Here is what she did all day:
Sā tipi e le teine / # le teine (fa'amalama).
PST cut ERG SPEC girl / SPEC girl.ABS all.day
'The girl cut (the vegetables) (the whole day).'

This observation holds true for *fa'a*-causatives, as absolutive marked external arguments are ungrammatical (322).[79]

[77] There is a consensus that the 'dropped' indefinite object is not projected in the syntax. However, alternative analyses suggest the presence of an unspecific *pro* depends on the semantic interpretation of the dropped objects (cf. Dvořáková 2017, Mittwoch 2005 on generic and habitual interpretations) or an incorporation of the object into the verb (e.g. Armstrong 2016, Mateu 2012b, Martí 2011 on Spanish).

[78] If the original subject argument *le tama* 'the boy' is marked by absolutive case, the meaning of the sentence changes as the clause is interpreted either as subject drop or reflexivization.

(i) a. *Sā solo le tama.*
PST wipe SPEC boy.ABS
Intended: 'The boy wiped.'
Instead: 'Someone wiped the boy.'
OR: 'The boy wiped himself.'

b. *Sā tipi le teine.*
PST cut SPEC girl.ABS
Intended: 'The girl cut.'
Instead: 'The girl was cut.'

[79] If *fa'a*-causatives co-occur with a single animate absolutive argument, the clause is ambiguous in licensing a subject-drop or a reflexive interpretation (cf. FN78; Read 2010, Mosel & Hovdhaugen 1992).

(i) *Sā fa'a-mamā le tama*
PST CAUS-clean SPEC boy
'Someone cleaned the boy.' / 'The boy cleaned himself.'

(322) a. A boy works at a service company. Today, he was called to a big house which he had to clean. Here is what he did all day:
Sā fa'a-mamā e le tama / # le tama (fa'amalama).
PST CAUS-clean ERG SPEC boy SPEC boy.ABS all.day
'The boy cleaned (the house/something in the house).'

b. A girl works in a kitchen of a restaurant. Today, she was in charge of the vegetables. Here is what she did all day:
Sā fa'a-nini'i e le teine / # le teine (fa'amalama).
PST CAUS-small ERG SPEC girl SPEC girl.ABS all.day
'The girl cut (the vegetables).'

As ergative case in Samoan depends on the presence of an internal argument DP (cf. section 5.2.2.3), the presence of ergative case on the external argument indicates the presence of a silent *pro* in object position. [80] Therefore, object deletion appears to be ungrammatical in Samoan if detached from the event structure of the verbal predicates. As a result, object deletion is not a reliable diagnostic for manner/result complementarity in Samoan.

5.4.2 Result diagnostics

In this section, I turn to diagnostics that have been argued to be sensitive to the presence of a result state in the event structure of verbal predicates (cf. section 2.2.2). This includes (i) the deletion of the external argument, (ii) the availability of a restitutive reading of *toe* 'again', (iii) restrictions on resultative constructions and (iv) the denial of result state.

[80] Mosel & Hovdhaugen (1992) mention a class of labile verbs that show the pattern expected for object deletion in Samoan. This is demonstrated for *'ai* 'eat' in which the single absolutive argument can be interpreted as either the external or the internal argument. In this context, the absolutive marked external argument seems to indicate the absence of the internal argument in the syntax.

(i) a. *Sā 'ai le teine.*
PST eat SPEC girl.ABS
(a) 'The girl ate (something).'
(b) 'The girl was eaten by someone.'

b. *Sā 'ai e le teine.*
PST eat ERG SPEC girl.ABS
'The boy ate (something).'
(Mosel & Hovdhaugen 1992: 108)

Crucially, this group of labile verbs alternate between ERG-ABS and ABS-OBL case alignment (ii). Therefore, the subject reading of the sole absolutive argument does not arise from actual object deletion but reflects the subject marking in the ABS-OBL case frame.

(ii) a. *Sā 'ai e le teine le i'a.*
PST eat ERG SPEC girl SPEC fish.ABS
'The boy ate the fish.'

b. *Sā 'ai le teine i le i'a.*
PST eat SPEC girl.ABS OBL SPEC taro
'The girl ate some fish.' (ibid.)

5.4.2.1 Deletion of the external argument

A first diagnostic for the presence of a result state in the event structure of a verb comes from the observation that cross-linguistically causative verbs, but not manner verbs, tend to potentially appear in the absence of an external argument, i.e. in anticausative configurations (cf. Alexiadou 2017, Koontz-Garboden 2009, Haspelmath 1993). However, as already indicated in section 2.2.2.1, the ability to form agent-less verb forms is determined by the encyclopedic entry of the root. On the one hand, causative result verbs like *murder* require the presence of an external argument and is infelicitous in anticausative contexts. On the other hand, some languages like Mandarin or Brazilian Portuguese manner verbs have anti-agentive verb forms in which the external argument is not syntactically projected, despite the mono-eventive nature of the verb. Therefore, this diagnostic must be interpreted in the context of the respective language.

In the context of Samoan *fa'a*-causatives, it has been noted already that this class of causative verbs imposes an agentivity-restriction by obligatorily introducing an external argument. As a result, these verbs cannot be used as anticausatives while the (agentive) external argument is syntactically and semantically absent.

(323) # *Sā fa'a-gau le lālā.*
PST CAUS-break SPEC branch
Intended: 'The branch broke.'
Instead: 'Someone broke the branch.' / 'The branch was broken.'

Instead, anticausative meaning is expressed by bare PC-roots like *gao* 'be.broken', often in the context of the inchoative aspect marker *'ua* (see sections 5.2.1.2 and 5.3.3.1).

(324) *'ua gau le lālā.*
INCH be.broken SPEC branch.ABS
'The branch broke.' (Collins 2010: 55)

Likewise, verbs that have a manner component cannot be used in the absence of an (agentive) external argument. Although in discourse, the external argument can be dropped, it is still syntactically represented, as discussed in depth by Otsuka (2000) on Tongan.

(325) a. # *Sā tulei le fa'itoto'a.*
PST push SPEC door.ABS
Intended: 'The door pushed.'
Instead: 'Someone pushed the door.'

b. # *Sā fa'ī le lālā.*
PST break SPEC branch.ABS
Intended: 'The branch broke off.'
Instead: 'Someone broke off the branch.'

However, a class of manner verbs can be derived by the stativizer *ma-* to form intransitive predicates that demote the ergative marked external argument – although this morphological process is no longer productive in present day Samoan (Collins 2010, Mosel & Hovdhaugen 1992, Mosel 1985, cf. Dhillon et al. 2009 on Niuean, Evans 2003 for an overview of Oceanic). This class includes verbs like *fa'ī* 'break.off', *tala* 'unfold' or *'ini* 'pinch', but not verbs like *solo* 'wipe' or *tipi* 'cut'. The derived verb forms "either express a state of being resulting from the action denoted by the simplex or a process in which an uncontrolling participant is involved and which is not considered as being initiated by an agent" (Mosel & Hovdhaugen 1992: 184). Therefore, *ma-* forms agentless predicates from verbs that entail a manner component. However, the de-agentivized *ma*-verbs license natural causers, which merge as oblique arguments, suggesting that theses verbs entail a result state in their event structure. This is illustrated for *i le matagi* 'from the wind' in the context of *fa'ī* 'break off'.

(326) *'ole'ā ma-fa'ī le lālā (i le matagi).*
PROG STAT-break SPEC branch.ABS OBL SPEC wind
'The branch broke (from the wind).' (Collins 2010: 63)

Crucially, the root $\sqrt{fa'i}$ has been identified to denote the manner of an action, based on its combinatorial restrictions on instrumental modifiers. Collins (2010: 43) paraphrases the verb as denoting "a pulling motion, to stress and twist something until the material is ruptured." Therefore, the causing event is specified vaguely enough for natural causers like the wind to satisfy the manner component. In this, roots like *fa'i* may be related to *break*-type verbs in English, or (optionally) causative manner verbs in French and Greek, in modifying the causing event (Alexiadou et al. 2017, Anagnostopoulou 2017, Embick 2009). In the next sections, I demonstrate that causative manner verbs simultaneously entail an underspecified result state.

5.4.2.2 Restitutive toe *'again'*

A second diagnostic for the presence of a result component comes from the availability of a restitutive reading of repetitive modifiers, such as 'again', in addition to a repetitive reading (see section 2.2.2.2). Under a restitutive reading, 'again' presupposes that the

result state of a bi-eventive causative predicate has occurred before. As only bi-eventive causative verbs must have a result state in their event structure, mono-eventive manner verbs should not license a restitutive reading of repetitive modifiers (cf. Lechner et al. 2015, Beck & Snyder 2001b, von Stechow 1996).

In Samoan, the repetitive modifier *toe* 'again' has been described to allow for restitutive readings, which makes this diagnostic available in this language (Hohaus 2016). This can be shown for *fa'a*-causatives in (327), where the contexts force a restitutive reading as the denoted action is performed for the first time.

(327) a. Peter bought a new table. As it is new, it is spotlessly clean. In the evening, Peter and his family had their first dinner on the new table. After the dinner, the table is very dirty because there are a lot of crumbs on it and some spilled-over juice. Therefore,
Sā toe fa'a- mamā e Pita le laulau. RESTITUTIVE
PST again CAUS-clean ERG Peter SPEC table.ABS
'Peter cleaned the table again (and it was clean before).'

b. At a thrift shop, Peter found a pair of sunglasses that he really liked, but the temples were broken. But as he really liked the glasses, he bought them for a cheap price. At home, he fixed them with some type and glue and he was wearing them during the summer. One day, his little grandson visited him and played with the glasses. Unfortunately,
Sā toe fa'a-ma-fa'ī e le tama le mata tiota. RESTITUTIVE
PST again CAUS-STAT-break ERG SPEC boy SPEC glasses.ABS
'The boy broke the glasses (and it was broken before).'

In the context of manner verbs, *toe* 'again' divides this group of verbs in two classes according to the availability of a restitutive reading. On the one hand, there are mono-eventive manner verbs that do not entail a result state. Here, the verb solely denotes the manner of an action and, therefore, does license a restitutive reading (328).

(328) Mary and her dog were playing outside. Suddenly, the dog brings a ball from the porch. But Mary does not want to play with the ball, so she kicked the ball again.
#*Sā toe kiki e Malia le polo.* RESTITUTIVE
PST again kick ERG Mary SPEC ball.ABS
Intended: 'Mary kicked the ball again, and the ball was ??away before.'

On the other hand, most manner verbs of the *wash-* and *cut-&-break*-domain appear to entail a result state as a restitutive reading of *toe* 'again' is felicitous in these contexts. This is demonstrated in (329)a, where the manner verb *solo* 'wipe' can be used in combination with *toe* 'again', even though the table has never been wiped before.

(329) a. Peter bought a new table. As it is new, it is spotlessly clean. In the evening, Peter and his family had their first dinner on the new table. After the dinner, the table is very dirty because there are a lot of crumbs on it and some spilled-over juice. Therefore,
Sā toe solo e Pita le laulau. RESTITUTIVE
PST again wipe ERG Peter SPEC table.ABS
'Peter wiped the table again (and it was clean before).'

b. At a thrift shop, Peter found a pair of sunglasses that he really liked, but the temples were broken. But as he really liked the glasses, he bought them for a cheap price. At home, he fixed them with some type and glue and he was wearing them during the summer. One day his little grandson visited him and played with the glasses. Unfortunately,
Sā toe fa'ī e le tama le mata tiota. RESTITUTIVE
PST again break.off ERG SPEC boy SPEC glasses.ABS
'The boy broke the glasses with his hands again (and it was broken before).'

The data in (329) suggests that this class of causative manner verbs denotes the manner of an action, but at the same time entails a result state (Alexiadou et al. 2017, Anagnostopoulou 2017 on optionally causative manner verbs, cf. Embick 2009). Crucially, this class of verbs overlaps with verbs that form agentless variants by combining with de-agentivizing prefix *ma-*, such as *fa'ī* 'break.off' in (326). However, this observation does not hold true for all causative manner verbs as not all verbs of this class can participate in this de-agentivizing process – as indicated by the ungrammaticality of **ma-solo.* In addition, the presence of a result state in the event structure of many Samoan manner verbs may explain the ungrammaticality of object deletion, as described in section 5.4.1.3. Under the assumption that the internal argument is introduced within a result state denoting Res(ult)P, the ungrammaticality of object deletion is expected (cf. section 2.2.3). In the next section, I further elaborate on the nature of the result state, which is entailed by causative manner verbs.

5.4.2.3 Restricted resultatives

A third diagnostic comes from restricted resultatives, which refers to the properties of the result state. As discussed in section 2.2.2.3, causative predicates, in which the result state is modified by a root, cannot combine with resultative secondary predicates that introduce a result state that is different from the one denoted by the causative verb The one exception to this is secondary predicates that further specify the result state (i.e. "the unique path constraint"; Goldberg 1991). In contrast, (causative) manner verbs that do not specify a result state can freely combine with all types of result denoting predicates, as long

as the result state can be interpreted to be brought about by the action denoted by the verb (cf. Beavers & Koontz-Garboden 2012, Rappaport Hovav & Levin 2010, Kratzer 2005, Goldberg 1991).[81]

This generalization holds true for Samoan Type-B-RSVCs. On the one hand, manner verbs, such as *mili~mili* 'caress, rub gently', can combine with causative result verbs that even denote contradictory result states. This supports the assumption that this class of verbs does not entail a result state.

(330) *Sā mili~mili fa'a-ala / fa'a-moe~moe e Malia le pepe.*
PST RED~rub CAUS-awake / CAUS-RED~sleep ERG Maria SPEC baby
'Maria caressed the baby awake / to sleep.'

This contrasts with *fa'a*-causatives that do not readily occur as the initial predicate in Type-B-RSVCs. Especially if both causative verbs denote a separate result state, such as *mamā* 'clean' and *mago* 'dry' in (331)a, the construction is infelicitous.

(331) a. # *Sā fa'a-mamā fa'a-mago e Pita le laulau.*
PST CAUS-clean CAUS-dry ERG Peter SPEC table.ABS
Intended: 'Peter dried the table by cleaning it.'

b. # *Sā fa'a-mamā fa'a-nuti e Pita le ipu.*
PST CAUS-clean CAUS-crushed ERG Peter SPEC cup.ABS
Intended: 'Peter broke the cup by cleaning it.'

However, *fa'a*-causatives do not appear to be infelicitous as the initial verb in Type-B-RSVCs in general. If the non-initial causative verb can be interpreted to further specify the result state, the construction becomes more acceptable for some speakers.

(332) %/? *Sā fa'a-gao fa'a-la'i<ti>ti e tama le la'au.*
PST CAUS-break CAUS-<RED>small ERG boy SPEC tree.ABS
'The boy broke the tree into small pieces.'

Crucially, causative manner verbs, which have been shown to denote the manner of an action, but also entail a result state, combine freely with various types of result states in Type-B-RSVCs. This is shown for *solo* 'wipe' and *tipi* 'cut' below.

[81]Note that the *unique path constraint* appears to also hold true for means constructions, as indicated by the infelicity of the examples in (i). Therefore, the underlying configuration of Type-B-RSVCs is not expected to affect the results of this diagnostic – by assuming that Type-B-RSVCs resemble either resultative secondary predicate or the means construction.
(i) a. *#Peter cleaned the table by drying it.* b. *#Peter dried the table by cleaning it.*

(333) a. *Sā solo fa'a-mamā / fa'a-mago /fa'a-ta'e e Pita le laulau (tioata).*
PST wipe CAUS-clean CAUS-dry CAUS-cracked ERG Peter SPEC table.ABS glass
'Peter cleaned/dried/broke the glass table by wiping it.'

b. *Sā tipi fa'a-pa'ū e Pita le la'au.*
PST cut CAUS-fall ERG Peter SPEC tree.ABS
'Peter fell the tree by cutting it.'

c. *Sā tipi fa'a-nini'i e Pita le fasipovi.*
PST cut CAUS-small ERG Peter SPEC meat.ABS
'Peter cut the meat into small slices.'

The ability to combine with various result state denoting V2s in Type-B-RSVCs indicates that causative manner verbs do not lexically specify their entailed result state. Instead, the result state is underspecified but associated with the action denoted by the root (cf. Alexiadou et al. 2017, Anagnostopoulou 2017, Embick 2009).

In this context, it is important to highlight that Samoan exhibits a fairly elaborated inventory of stative PC-roots in the *cut-&-break* domain. This is demonstrated in (334), where each root denotes a specific type of 'broken' state, related primarily to the texture of the object (Collins 2010, Milner 1966, cf. Gast et al. 2014, Næss 2012)

(334) a. $\sqrt{gau}$ 'be broken, be splintered'
b. $\sqrt{li'i}$ 'be bursted, be scattered in small fragments'
c. $\sqrt{nuti}$ 'be smashed, be crushed'
d. $\sqrt{ta'e}$ 'be cracked, be shattered' (Milner 1966)

While these concepts are typically realized by target state adjectives derived from causative verbs, i.e. *cracked*, the roots above denote simple states which do not entail a causing event. Therefore, the resulting stative verbs are more similar to stative PC-verbs of disintegration in German, such as *kaputt* 'broken, damaged'.

(335) *Er fuhr das Auto kaputt.* GERMAN
he drove the car broken
'He drove the car to a wreck.' (Müller 2002: 214)

5.4.2.4 Denial of result

Lastly, the denial of a result has been shown to be infelicitous in the context of causative (result) verbs. As the verb entails a result state, the denial of this result state leads into a contradiction (cf. Beavers & Koontz-Garboden 2012, Beavers 2011, Rappaport Hovav &

Levin 1998). However, as noted in section 2.2.2.4, this diagnostic may not be applicable in languages that exhibit defeasible causatives, which actually allow the denial of a result state of causative predicates in agentive contexts (Sato 2019 on Indonesian, Paul et al. 2016 on Malagasy, Dell 1983/1984 on Tagalog, cf. Martin & Demirdache 2020).

Crucially, Samoan belongs to the class of languages that exhibit defeasible causatives, as the result state of both causative manner verbs (such as *solo* 'wipe') and causative result (*fa'a*-causatives), can co-occur, without contradiction, with clauses that deny the result state that is entailed by the verbal predicate. Therefore, the examples are felicitous, even if the matrix clause is marked by the (past) perfective aspect marker *sā* (cf. Hohaus 2016).

(336) a. *Sā solo e le tama le laulau* ***ae le'i mamā ai.***
PST wipe ERG SPEC boy SPEC table.ABS but NEG clean ANAPH
'The boy wiped the table, but the table is not clean.'

b. *Sā fa'a-mamā e le tama le laulau* ***ae le'i mamā ai.***
PST CAUS-clean ERG SPEC boy SPEC table.ABS but NEG clean ANAPH
'The boy cleaned the table, but the table is not clean.'

As a result, this diagnostic is not working for Samoan, as a projected result state can be denied, even in the context of causative result verbs like *fa'a*-causatives. As discussed by Martin & Demirdache (2020), various sources may be responsible for a non-culminating interpretation of causative accomplishment predicates cross-linguistically. However, an analysis of non-culminating causatives in Samoan is beyond the scope of this thesis.

5.4.3 The event and argument structure of Samoan verbal predicates

The result of the diagnostics on the event and argument structure of Samoan verbal predicates is summarized in Table 7.

	Manner (mono-eventive) (*tulei* 'push')	**Causative manner** (bi-eventive) (*solo* 'wipe')	***fa'a*-causatives** (bi-eventive) (*fa'a-pa'ū* 'fell')
Manner component	Yes	Yes	No
Restrictions on instrumental modifiers	Yes	Yes	No
Combination with result-XPs (RSVCs)	Yes	Yes	No
Causative alternation	No	(No) (% derived by *ma-*)	(No) (derived from PC)
Result component	No	(Yes) (underspecified)	Yes (specified)
Restitutive reading of *toe* 'again'	No	Yes	Yes
Restrictions on external arguments	Yes (agent)	Yes (agent)	Yes (agent)
Object deletion	No?	No	No
Denial of result	Yes	Yes	Yes

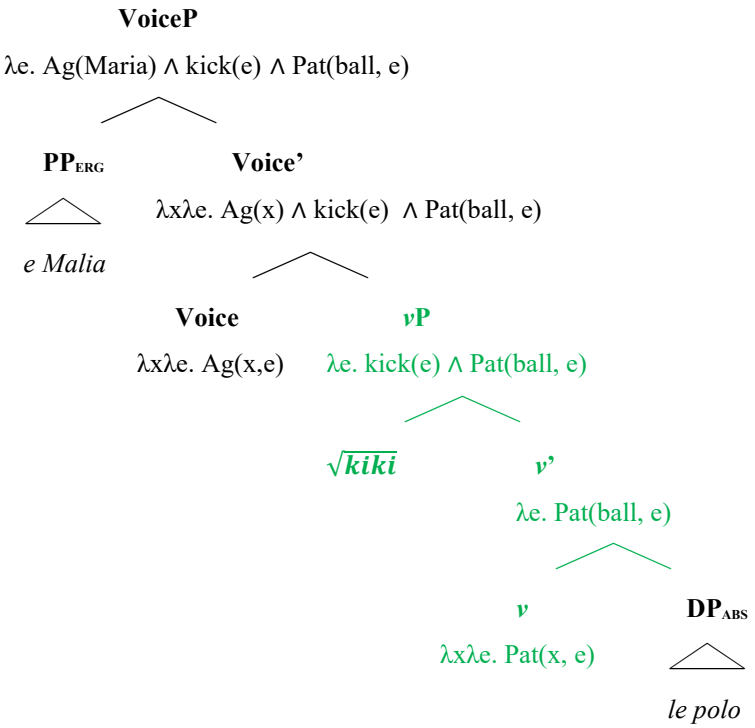
Table 7: The distribution of manner and result meaning components in Samoan simple predicates.

The study of the lexical semantics of verbal predicates suggests Samoan verbs fall into three basic classes according to their event structure. On the one hand, there are mono-eventive manner verbs that solely denote the manner of action without entailing a result state. In this class, there are transitive verbs, such as *kiki* 'kick', and unergative verbs like *pese* 'sing' or *siva* 'dance'. On the other hand, *fa'a*-causatives show the typical properties of causative result verbs in solely denoting the result of an underspecified action.[82] In addition, Samoan exhibits a third class of causative manner verbs that denote the manner of an action and simultaneously entail an underspecified result state. Adopting the configurational approach on argument and event structure, as outlined in section 2.2.4, the

[82] Note that the focus of this study is on *fa'a*-causatives. In addition, Samoan can also derive causative verbs that are derived from stative PC-root via reduplication (e.g. *ga~gau* 'break', or the causative prefix *ta-* (e.g. ta-puni 'close'; Mosel & Hovdhaugen 1992, cf. Massam 2013 on the causative light verb ta, which is a semantically bleached form of the lexical verb ta 'hit' in Niuean). As I have not discussed these types of causatives here, I do not intend to make a claim about their argument and event structure. However, it has been observed that these types of causatives are synchronically less productive than *fa'a*-causatives. In contrast to *fa'a*-causatives, these causatives seem to combine with non-volitional (animate) causers as external arguments. In future research, the relation between *fa'a*-causatives and (potentially lexical) causatives needs to be further investigated.

meaning of verbal predicates results from the syntactic position of the root in relation to the event introducing head *v*. Therefore, manner roots like $\sqrt{kiki}$ 'kick' merge as event-modifiers in the position that has been identified to be responsible for event modification, i.e. sister of *v*', as shown in (337).

(337)

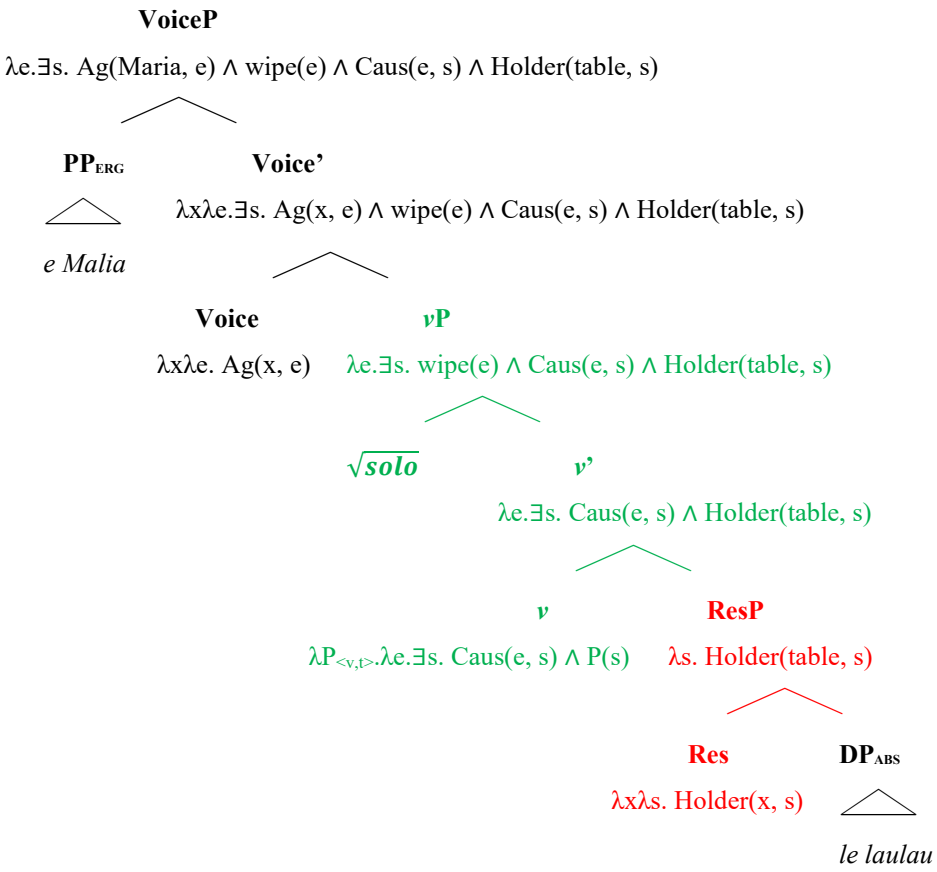


In terms of argument structure, this root class requires the presence of an agentive external argument role, which is introduced by a Voice head into the structural derivation. In this property, Samoan manner verbs resemble English manner verbs. However, unlike English manner verbs, Samoan (ergative) manner verbs cannot occur intransitively, as the internal argument cannot be deleted.[83] As a consequence, many manner roots can appear in transitive contexts only.

The mono-eventive structure of manner verbs contrasts with the bi-eventive structure of causative manner verbs. Therefore, I assume that causative manner roots merge as event modifiers of *v* in causative configurations. As the result state is underspecified, a bare ResultP merges in the complement position of *v*, which gives rise to causative semantics. In this structural configuration, Samoan causative manner roots resemble *break*-type roots in English, in that they entail an underspecified result state (cf. Alexiadou et al. 2017, Anagnostopoulou 2017, Embick 2009).

[83] As this restriction seems to hold true for all transitive verbs in Samoan, I hypothesize that Samoan does not allow the internal argument role to be saturated by existential closure (cf. Dvořáková 2017, Alexiadou et al. 2014a, Chung & Ladusaw 2004). However, the nature of this restriction and its potential relation to radical *pro*-drop is only barely understood, which is why I attribute its investigation to future research.

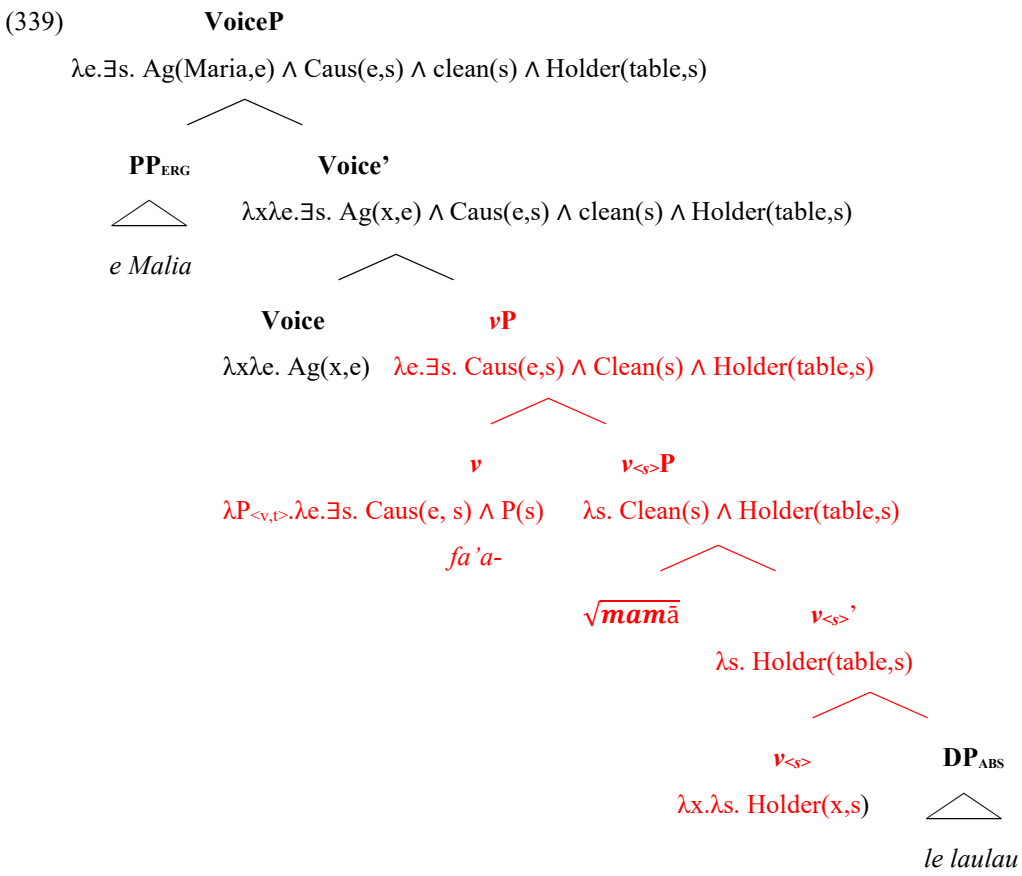
(338)



In contrast to manner verbs, I assume that the internal argument of causative manner verbs is introduced within the silent result state. Therefore, the ungrammaticality of object deletion follows from the bi-eventive structure of causative manner verbs, as in the absence of an internal argument, the state predicate would occur without a participant. Regarding the external argument, causative manner roots fall into two classes. On the one hand, roots like $\sqrt{solo}$ 'wipe' obligatorily require an agentive external argument and cannot occur intransitively. On the other hand, roots like $\sqrt{fa'\bar{\imath}}$ are not subject to such a constraint and can occur in intransitive contexts, if prefixed by the de-agentivizing prefix *ma-*. Although a detailed analysis of *ma-* is still pending, it could be analyzed as the spell-out of *v* in the context of causative manner roots in the absence of Voice.

Lastly, the event and argument structure of *fa'a*-causatives has already been presented in section 5.3. Focusing on *fa'a*-causatives that are derived from stative and anti-causative verbs, this class of causative result verb embeds an *v*P complement under an event-introducing *v* head. Therefore, *fa'a*-causatives differ from English lexical causatives, in that the result state in *fa'a*-causatives is denoted by a pre-categorized *v*P. As the PC-root solely modifies the result state, this class of causative verbs leave the properties of the causing event underspecified.

(339)



A further contrast to English lexical causatives is that Samoan *fa'a*-causatives obligatorily introduce an agentive external argument, i.e. they require the presence of a Voice projection. Therefore, *fa'a*-causatives cannot appear in anticausative contexts or in combination with natural or non-volitional causers. Instead, PC-roots form anticausative predicates in without *fa'a*-, and in the absence of designated (anti)causative morphology, as shown in section 5.2.1 (cf. Hohaus 2016, Koopman 2012, Koontz-Garboden 2007a on Tongan).

5.5 Summary

To summarize, the results of the investigation of the event and argument structure of Samoan predicates provide additional support for the cross-linguistic validity of manner/result complementarity, as no root could have been identified to denote a manner and result component at the same time. However, the study revealed that Samoan verb classes differ from their English counterparts in several respects. On the one hand, I have shown that Samoan *fa'a*-causatives take pre-categorized verbal complements up to VoiceP. This property contrasts with English lexical causatives, in which the result state is denoted by an a-categorial ResultP. As I demonstrate in the next section, the morphosyntactic structure of *fa'a*-causatives plays a crucial role in the analysis of Samoan Type-B-RSVCs.

On the other hand, Samoan exhibits a class of causative manner verbs which denote the manner of the causing action and entail an underspecified result state. While this class of verbs resembles English *break*-type verbs with respect to their event structure, Samoan causative manner verbs require the presence of an external argument (in their underived form). A further consequence of the bi-eventive structure of causative manner verbs is that the internal argument cannot be deleted, as its absence would violate the argument-per-subevent condition. As the class of causative manner verbs is fairly elaborated, at least in the *wash*- and *cut-&-break*-domain, this restriction will be shown to have a significant influence on the interpretation of Type-B-RSVCs.

Lastly, Samoan has been shown to exhibit language specific morphosyntactic properties that will become relevant for analyzing the structure of Type-B-RSVCs. Firstly, I have argued that Samoan exhibits prepositional ergative case, which is the result of limited nominal licensing abilities in syntactic ergative languages. In particular, I have proposed that Voice does not function as a secondary licensing head, which is why it can only license a single nominal argument. Secondly, Samoan VSO word order has been analyzed as VP-movement of the whole VoiceP/*v*P to the specifier of an inflectional head in the inflectional domain. Therefore, Samoan verbs do not undergo head movement out of the verbal domain, which leaves the *v*P internal configuration intact.

In the next chapter, I demonstrate how these findings help us to understand the properties of the event and argument structure of Samoan Type-B-RSVCs.

Chapter 6: Type-B-RSVCs in Samoan

This chapter investigates, against the background of the event and argument structure of (simple) verbal predicates, the event and argument structure of Samoan Type-B-RSVCs, in which a manner V1 combines with *fa'a*-causatives to express resultative meaning (Mosel 2004, Mosel & Hovdhaugen 1992).

(340) a. *Sā* ***lamu*** ***fa'a-malū*** *e* *le* *tama* *mea* *'ai.* SAMOAN
GEN chew CAUS-soft ERG SPEC boy thing eat.ABS
'He chews the food soft.' (Mosel & So'o 2000: 62)

b. *Sā* ***tipi*** ***fa'a-pa'ū*** *e* *Pita* *le* *la'au.*
PST cut CAUS-fall ERG Peter SPEC tree.ABS
'Peter fell the tree by cutting it.'

c. *Sā* ***pese*** ***fa'a-moe~moe*** *e* *Malia* *le* *pepe.*
PST sing CAUS-RED~sleep ERG Maria SPEC baby.ABS
'Maria put the girl to sleep by singing.'

By examining the type of morphosyntactic and semantic composition, I show that Samoan Type-B-RSVCs combine two *v*Ps below the Voice level. In particular, I demonstrate that the manner V1 is adjoined to the causative V2. Consequently, Samoan Type-B-RSVCs can be classified as a means construction, related to resultative RSVCs in verb-framed languages such as Japanese, Korean or Uyghur (Sugar 2019, Ko & Sohn 2015, Tomioka 2006). In comparison to the means construction in English, the argument structure of Samoan Type-B-RSVCs is more restricted, as the internal argument of the adjoined predicate must be interpreted as the internal argument of the V2. However, I argue that this restriction follows from language specific constraints on the deletion of internal arguments and the limited licensing ability of Voice in a syntactic ergative language like Samoan. As a result, Samoan Type-B-RSVCs support the assumption made in chapter 3 that the cross-linguistic variation of resultative constructions in serializing and non-serializing languages follows from language specific constraints on argument and event structure formation, and does not instantiate different types of constructions.

This chapter begins with a brief background on the status of Type-B-RSVCs in colloquial Samoan and its relation to other constructions that are used to encode resultative(-like) meaning, such as, for example, purpose clauses (section 6.1). I then turn to the distribution of verbal predicates within Type-B-RSVCs, showing that the result-denoting

V2 slot is exclusively filled by *fa'a*-causatives derived from unaccusative predicates, while the V1 slot is subject to greater flexibility, although transitive (causative) manner verbs are strongly preferred. This is also reflected by the argument structure of Type-B-RSVCs, which do not deviate from the argument structure of its individual parts (section 6.2). In examining the type of morphosyntactic composition, I demonstrate that the manner V1 is merged as an adjunct to the causative V2, based on morphosyntactic and semantic evidence, including reduplication, adverbial modification and causative morphology (section 6.3). Finally, I show that the two verbs predicate over the same (causing) event, in that the manner V1 modifies the causing event entailed by the causative V2. Based on these results, I show that the event and argument structure, as well as the distribution of verbal predicates, follows from general morphosyntactic constraints, which are related to the language specific morphosyntactic properties of Samoan (section 6.4).

6.1 The status of Type-B-RSVCs and competing constructions

Although Type-B-RSVCs are well attested in Samoan literature, textbooks (Mosel & So'o 2000) and grammar descriptions (Collins 2017, Mosel 2004, see also Mosel & Hovdhaugen 1992), my participants emphasized that Type-B-RSVCs are not very common in colloquial speech. Instead, Type-B-RSVCs were judged as outdated and high register – an observation that has not been reported in the sources cited above. This may indicate that the use of Type-B-RSVCs in present-day Samoan is in decline (see also Hohaus 2018 for rapid changes in Samoan grammar). Significantly, Type-B-RSVCs are not attested in closely related Polynesian languages, except Rotuman (Verkerk & Frostad 2013, cf. Massam et al. 2016, Massam 2013 on Niuean).

The critical status of Type-B-RSVCs was also reflected by interspeaker variation, with respect to the grammaticality and productivity of the construction. On the one hand, five out of six participants judged Type-B-RSVCs as fully grammatical, whereas one speaker rejected Type-B-RSVCs altogether. On the other hand, some speakers used Type-B-RSVCs very productively, while other speakers appeared to be more conservative, being less confident in producing new combinations of verbs within Type-B-RSVCs. For example, only two out of three participants accepted intransitive unergative verbs as the V1 in Type-B-RSVCs, and with those who accepted it, the construction appeared to be quite restricted. Yet, it is not clear whether this variation reflects an ongoing change, the socio-linguistic background of the speakers, or simply the small sample size. Young heritage speakers in patricular were less confident in using Type-B-RSVCs, which is why I

have excluded their judgements from the present study (see Muāgututi'a 2018 on the influence of English on heritage Samoan in Hawai'i). In future research, the data needs to be checked with additional Samoan speakers in Samoa itself.

In addition, Type-B-RSVCs are in competition with other constructions that can also convey resultative(-like) semantics and are used more frequently in colloquial Samoan. Therefore, two elliptical constructions are especially important to distinguish from Type-B-RSVCs. Firstly, there are purpose clauses with the T/A-marker *e*, in which a clause marked by the generic TMA marker *e* expresses the purpose of the action denoted by the matrix verb. This type of purpose clause can occur right after the matrix predicate (341) or in clause-final position, and can occur in an elliptical variant without an overt realization of the TMA marker *e* (Mosel 2004, Mosel & Hovdhaugen 1992).

(341) a. *Alu* ***(e)*** ***fa'a-tau*** *se* *suka!*
go GENR CAUS-cost UNSPEC sugar.ABS
'Go and/to buy some sugar!' (Mosel 2004: 273)

b. *Sā* ***solo (e)*** ***fa'a-mamā*** *e* *le* *tama* *le* *laulau.*
PST wipe GENR CAUS-clean ERG SPEC boy SPEC table.ABS
'The boy wiped the table to make it clean.'

Although the surface structure of the elliptical purpose clauses in (341) matches Type-B-RSVCs, the two constructions differ in their syntactic composition, as only Type-B-RSVCs appear to be monoclausal (Mosel 2004). While semantic difference may be subtle at times, speakers are aware of the context in which the presence of a (covert) *e* is necessary for the construction to be grammatical.

Secondly, Samoan exhibits low *v*P-coordination with the coordinator *ma* (Collins 2017, Mosel & Hovdhaugen 1992). As noted by Mosel (2004), the coordinator *ma* can be omitted, which results in two juxtaposed verbs, as shown in (342).

(342) a. *'O* *lea* *na* ***tagi (ma)*** ***tautala*** *ai* *loa* *le* *tuna* *ia* *Sina.*
PRS DEM TAM cry and talk ANAPH then SPEC eel.ABS DEM Sina
'And so, the eel cried and spoke to Sina …' (Mosel & So'o 1997: 135)

b. *Sā* ***solo (ma)*** ***fa'a-mamā*** *e* *le* *tama* *le* *laulau.*
PST wipe and CAUS-clean ERG SPEC boy SPEC table.ABS
'The boy wiped and made the table clean.'

However, Mosel (2004) observes that while covert *ma*-coordination frequently occurs in the context of PC-verbs, rarely does it combine two action predicates. Furthermore, coordination is expected to show morphosyntactic and semantic effects that are different from RSVCs. This will be discussed in more detail in section 6.4.2.

In addition, many participants suggested purpose clauses with subjunctive complementizer *ia* as an alternative way to more naturally express resultative semantics. In this construction, the result state is realized in an adverbial clause in clause-final position (Mosel & Hovdhaugen 1992). Because of the obligatory presence of *ia*, this construction is easily distinguishable from Type-B-RSVCs.

(343) a. *O le masani a lea tagata o le fafaga=ina lea o puaa*
PRES SPEC habit POSS DEM person PRES SPEC feed-RSMP DEM POSS pig

ia pe~peti.
SUBJ RED~fat
'That person used to feed the pigs so that they became fat.'(Mosel & Hovdhaugen 1992: 357)

b. *Sā solo e Pita le laulau* ***ia mamā.***
PST wipe ERG SPEC table.ABS SUBJ clean
'Peter wiped the table so that it became clean.'

Finally, there are Type-C-RSVCs in which the result-denoting predicate is not derived by *fa'a-* but appears in its bare form. In contrast with Type-B-RSVCs, this construction is restricted to stative (adjectival) PC-predicates like *mamā* 'clean', whereas dynamic unaccusatives like *pa'ū* 'fall' are ungrammatical (cf. section 4.2.3).

(344) a. *Sā* ***solo mamā*** *e Malia le laulau.*
PST wipe clean ERG Maria SPEC table.ABS
'Maria wiped the table clean.'

b. * *Sā* ***tipi pa'ū*** *e Malia le la'au.*
PST cut fall ERG Maria SPEC tree.ABS
Intended: 'Mary cut the tree down.'

Interestingly, Type-C-RSVCs have not been reported for Samoan in previous literature. Therefore, it is not clear whether this construction is a recent innovation, which could be attributed to contact with English, or whether it follows a more general tendency in Polynesian languages to omit the causative prefix *fa'a-* in resultative constructions (cf. Verkerk & Frostad 2013). As the focus of this chapter is on Type-B-RSVCs, I leave the investigation of Type-C-RSVCs for further research.

6.2 The contribution of the individual predicates

This section focuses on the distribution of verb classes in Type-B-RSVCs and the influence of the individual predicates on the argument structure of the construction. In section 6.2.1, I demonstrate that the V2 position is restricted to *fa'a*-causatives that embed stative or anticausative verbs, whereas *fa'a*-causatives that embed unergative or middle verbs, along with other types of causatives, are ungrammatical. Regarding the V1 position, transitive (causative) manner verbs proto-typically occur in this position. However, unergative and *fa'a*-causatives also appear to be grammatical in this position, although their use tends to be dispreferred by most speakers. In the course of this investigation, I will show that this tendency can be explained by the morphosyntactic and semantic properties of Type-B-RSVCs.

Based on the distribution of verb classes, I turn to the argument structure of Type-B-RSVCs in section 6.2.2. I demonstrate that the morphosyntactic and semantic properties of the verbal predicates outside of the construction are maintained when they appear in Type-B-RSVCs. Therefore, Samoan does not exhibit intransitive Type-B-RSVCs, in which either the external or the internal argument can be dropped. Moreover, both verbs must match regarding the semantic type of their external argument (section 6.2.3). Consequently, verbs that introduce a causer external argument, such as weather verbs, are ungrammatical in Type-B-RSVCs. Lastly, although (as indicated by unergative V1s) the matching of the internal argument is not a necessary condition of Type-B-RSVCs, the internal argument must be shared if both verbs are transitive.

6.2.1 Distribution of verb classes

As already noted by Mosel (2004), the word order within Type-B-RSVCs adheres to an iconic ordering principle that reflects the logical ordering of the sub-events, i.e. the manner denoting V1 always precedes the causative V2. Therefore, a reverse order of the manner and causative predicates in Type-B-RSVCs is infelicitous.

(345) a. *Sā* ***solo*** ***fa'a-mamā*** *e* *Malia* *le* *laulau.*
PST wipe CAUS-clean ERG Mary SPEC table.ABS
'Mary cleaned the table by wiping it.'

b. # *Sā* ***fa'a-mamā*** ***solo*** *e* *Malia* *le* *laulau.*
PST CAUS-clean wipe ERG Mary SPEC table.ABS
'Mary cleaned the table by wiping it.'

(346) a. *Sā* ***tipi*** ***fa'a-pa'ū*** *e* *Pita* *le* *la'au.*
PST cut CAUS-fall ERG Peter SPEC tree.ABS
'Peter fell the tree by cutting it.'

b. # *Sā* ***fa'a-pa'ū*** ***tipi*** *e* *Pita* *le* *la'au.*
PST CAUS-fall cut ERG Peter SPEC tree.ABS
'Peter fell the tree by cutting it..'

The asymmetric distribution of manner and causative result verbs in Samoan Type-B-RSVCs is, therefore, in line with the cross-linguistic picture of Oceanic RSVCs. Based on the verb classes identified, in the last section I take a closer look at the distribution of the respective verb classes.

6.2.1.1 V1-position: (Causative) manner verbs

Regarding the V1 position, manner verbs like *milimili* 'caress' or *kiki* 'kick' commonly occur as the manner denoting predicate in Type-B-RSVCs. This is illustrated by *milimili* 'caress' and *kiki* 'kick' in example (7).

(347) a. *Sā* *mili~mili* *fa'a-ala* *e* *Malia* *le* *pepe.*
PST RED~rub CAUS-awake ERG Malia SPEC baby.ABS
'Maria woke up the baby by caressing her.'

b. *Sā* *kiki* *fa'a-ma-tala* *e* *le* *tama* *le* *faitoto'a*
PST kick CAUS-STAT-open ERG SPEC boy SPEC door.ABS
'The boy opened the door by kicking it.'

In addition to mono-eventive manner verbs, bi-eventive causative manner verbs, such as *solo* 'wipe' or *fa'ī* 'break (off)', also frequently appear in the manner-denoting slot. Therefore, the presence of an underspecified result state does not influence the distribution of these predicates in Type-B-RSVCs.

(348) a. *Sā* *solo* *fa'a-mamā* *e* *Pita* *le* *laulau.*
PST wipe CAUS-clean ERG Peter SPEC table.ABS
'Peter cleaned the table by wiping it.'

b. *Sā* *fa'ī* *fa'a-laiti* *e* *le* *Pita* *le* *lala.*
PST break CAUS-small ERG SPEC Peter SPEC branch.ABS
'Peter broke the stick into small pieces.'
(lit.: Peter made the stick (into) small pieces by breaking it.')

Moreover, unergative manner verbs, such as *pese* 'sing', can appear in the V1 slot. However, some of my participants indicated that this type of construction is only marginally acceptable, while others judged the sentences to be fully grammatical but did not use this construction productively (see 6.4.3 for a potential explanation of this observation).

(349) % *Sā pese fa'a-moe~moe e Malia le pepe.*
PST sing CAUS-RED~sleep ERG Maria SPEC baby.ABS
'Maria put the girl to sleep by singing.'

In contrast, middle verbs like *'ote* 'scold' cannot function as the manner V1 in Type-B-RSVCs. Instead, the sentence in (350) is interpreted to contain a silent TMA marker *e* with the causative predicate forming an adverbial clause on its own (also Mosel 2004, Mosel & Hovdhaugen 1992). It should be noted that the arguments appear with ABS-OBL case frame, if the middle *'ote* 'scold' is the matrix verb of the sentence (cf. section 5.2.2).

(350) *Sā 'ote *(e) fa'a-tagi Malia i le teine.*
PST scold GEN CAUS-cry Maria.ABS OBL SPEC girl
'Maria scolded the girl to make her cry.'
Intended: 'Maria made the girl cry by scolding her.'

Lastly, causative predicates may also occur in the V1 position, although they do not denote the manner of an action. Yet, in the examples below, *lo~lo'u* 'bend', derived via reduplication from the anticausative verbs, *lo'u* 'bend' modifies the causing event.

(351) *Sā lo~lo'u fa'a-ma-tala e Pita puipui u'amea o le fa'amalama*
PST RED~bend CAUS-STAT-open ERG Peter bars.ABS metal GEN SPEC window
'Peter opened the window by bending the metal bars.'
(lit.: 'Peter opened the metal bars of the window by bending them.'

However, as expected for resultative constructions, these combinations are somewhat rare and uncommon, which may be related to the *unique path constraint* (see section 2.2.2.3). Moreover, *fa'a*-causatives appear to be strongly dispreferred in the V1 position. While the combination of *gao* 'broken' and *laiti* 'small' may still be still marginal acceptable, a combination of *mamā* 'clean' and *mago* 'dry' is infelicitous.

(352) a. ?? *Sā fa'a-gao fa'a-la'i<ti>ti e Pita le lala.*
PST CAUS-beak CAUS-small ERG boy SPEC branch.ABS
'The boy break the tree into small pieces.'
(lit.: 'Peter made the stick (into) small pieces by breaking it.')

b. # *Sā* *fa'a-mamā* *fa'a-mago* *e* *Malia* *le* *laulau.*
PST CAUS-clean CAUS-dry ERG Maria SPEC table.ABS
Intended: 'Maria dried the table by cleaning it.'

In summary, this survey revealed that transitive (causative) manner verbs occur most natural as the manner denoting V1 in Type-B-RSVCs. In contrast, intransitive and *fa'a*-causatives are often only marginally acceptable, whereas middle verbs are ungrammatical.

6.2.1.2 V2-position: Fa'a-causatives

The non-initial position in Type-B-RSVCs is restricted to *fa'a*-causatives. However, there are some restrictions in relation to the predicate that can be embedded under *fa'a-* in this construction. In general, *fa'a*-causatives that embed stative (PC-)verbs, such as *ala* 'be awake' (353)a, or anticausative verbs, such as *pa'ü* 'fall' (353)b, are felicitous in their function as the result-denoting predicate in this construction.

(353) a. *Sā* *mili~mili* *fa'a-ala* *e* *le* *teine* *le* *pepe.*
PST RED-rub CAUS-awake ERG SPEC girl SPEC baby.ABS
'The girl keep the baby awake by caressing her.'

b. *Sā* *ta* *fa'a-pa'ū* *e* *le* *Pita* *le* *la'au.*
PST cut CAUS-fall ERG SPEC Peter SPEC tree.ABS
'Peter fell the tree by cutting it.'

Moreover, *fa'a*-causatives that embed stative/anticausative predicates derived by the de-agentivizing prefix *ma-*, such as *ma-tala* 'open', also appear in Type-B-RSVCs.

(354) a. *Sā* *tulei* *fa'a-ma-tala* *e* *Malia* *le* *faitoto'a.*
PST RED-push CAUS-open ERG SPEC SPEC door.ABS
'Maria opened the door by pushing it.'

fa'a-causatives derived from unergative predicates also appear to serve as the V2. In (355), the causative predicate *fa'a-tagi* which embeds the unergative verb *tagi* 'cry' describes the action caused by initial predicate *pō* 'slap'. However, these combinations appear to be rare, and speakers prefer a purpose clause instead.[84]

[84] The grammaticality of *fa'a*-causatives derived from unergative or middle verbs in the V2 of Type-B-RSVCs requires further investigation, as the claims made here are build on very few data points, making it difficult to establish a generalization. Especially in the context of embedded middle verbs, it would be relevant to check whether Type-B-RSVCs would be felicitous in a context, where the internal argument of the manner V1 corresponds to the external argument of the embedded middle verb. In example (356), the object of V1 corresponds to the embedded object of V2.

(355) *Sā pō fa'a-tagi e le tama le teine.*
PST slap CAUS-cry ERG SPEC boy SPEC girl.ABS
'The boy made the girl cry by slapping her.'

In contrast, *fa'a*-causatives embedding the middle verbs, such as *mana'o* 'want', are ungrammatical in Type-B-RSVCs (356).

(356) * *Sā kuka fa'a-mana'o e le tama le teine i le masi.*
PST cook CAUS-want ERG SPEC boy SPEC girl.ABS ACC SPEC cookie
Intended: 'The boy made the girl want a cookie by cooking.'

Furthermore, (causative) manner verbs cannot function as the result-denoting predicate in Samoan RSVCs. This is illustrated by *fa'ī* 'break off' in example (357), in which the respective events are not interpreted as having a causative relation.

(357) # *Sā tipi fa'ī e Malia le lālā.*
PST cut break ERG Maria SPEC branch.ABS
Intended: Maria broke the branches by cutting.'

This holds true for causative verbs formed by the reduplication or the causative light verb *ta-* , which is cognate with the lexical verb *ta* 'hit' (Mosel & Hovdhaugen 1992 on the various functions of ta, also Milner 1966, cf. Massam 2013 on ta being a light verb in closely related Niuean).[85] This is demonstrated in example (358) for *ta-tala* 'to open'.

(358) # *Sā kiki ta-tala e Malia le faitoto'a*
PST kick TA~open ERG Maria SPEC door.ABS
Intended: Maria kicked the door open.'

Instead, the clauses in (358) and (359) are interpreted as covert coordination construction, as in the presence of the coordinator *ma* 'and'. Therefore, the two predicates predicate over two separate events.

[85] In contrast to *fa'a-*, the causative function of *ta-* is less productive and derives causative predicates of (a set of) nouns (i) and unaccusative verbs (ii) (Mosel & Hovdhaugen 1992: 188f).

(i) a. *va'e* 'foot' → *ta-va'e* 'kick'
b. *pona* 'knot' → *ta-pona* 'cut into segments and remove the knots'
c. *lau* 'leave' → *ta'lau* 'produce leaves'

(ii) a. *mate* 'die → *ta-mate* 'kill'
b. *pisa* 'noisy' → *ta-pisa* 'make sound of revelry'
c. *lepe* 'fly' → *ta-lepe* 'blown down by the wind.'

Note, that *ta*-causatives is often not fully compositional, but idiosyncratic (as in *ta-va'e* 'kick'). Moreover, *ta-* causatives do not appear to be subject to an agentivity restriction as *te-lepe* (ii)c, for example, refers to a result caused by a natural causer. Such idiosyncrasies are excepted in root-selecting causatives (cf. section 5.3). However, the morphosyntactic properties must be attributed to future research, as they are beyond the scope of this thesis.

(359) a. *Sā tipi (ma) fa'ī e Malia le lālā.*
PST cut and break.off ERG Maria SPEC branch.ABS
'Maria cut the branch and broke it.'

b. *Sā kiki (ma) ta-tala e Malia le faitoto'a*
PST kick and TA-open ERG Maria SPEC door.ABS
'Maria kicked at the door and opened it.'

The distribution of verb classes is summarized in Table 8. Although the general pattern suggests a complementary distribution of manner and result denoting verbs, there is some variation with respect to the V1 position, which can be realized by causative result verbs under certain semantic constraints. Moreover, unergative verbs appear to occur in the V1 position. In contrast, the V2 is restricted to *fa'a*-causatives, as other causative verbs, like causative manner verbs or *ta*-causatives, are ungrammatical. However, while *fa'a*-causatives derived from unergative verbs may be accepted, *fa'a*-causatives derived from unaccusative predicates are strongly preferred.

Verb-classes	**Manner V1**	**Causative V2**
Manner (ergative)	Yes	No
Manner (unergative)	(Yes)	No
Causative manner (ergative)	Yes	No
fa'a-causatives (derived from unacc.)	No	Yes
middles	No	No
Lexical causatives (*ta*- and reduplication)	(Yes)	No
?*fa'a*-causatives (derived from unerg)	No	(Yes)
?*fa'a*-causatives (derived from middles)	No	???

Table 8: Distribution of verb classes in Samoan Type-B-RSVCs.

6.2.2 Argument structure

With respect to the argument structure, the individual predicates maintain the argument structure properties in Type-B-RSVCs. In this construction, the external argument is restricted to volitional agents only. In contrast, causers or instruments cannot appear in the contexts of Samoan Type-B-RSVCs. This is shown in (360), where *matagi* 'wind' or *solo* 'cloth' cloth are infelicitous.

(360) a. *Sā solo fa'a-mamā e Pita le laulau.*
PST wipe CAUS-clean ERG Peter SPEC table.ABS
'The Peter cleaned the table by wiping it'

b. # *Sā solo fa'a-mamā e le matagi le laulau.*
PST wipe CAUS-clean ERG SPEC wind SPEC table.ABS
'The wind cleaned the table by wiping it.'

c. # *Sā solo fa'a-mamā e le t-shirt le laulau.*
PST wipe CAUS-clean ERG SPEC t-shirt SPEC table.ABS
'The T-shirt cleaned the table by wiping it.'

The agentivity restrictions also determine potential verb classes to appear in the manner V1 slot. Therefore, stative, anticausative and middle verbs, as well as weather verbs, such as *agi* 'blow', are infelicitous in Type-B-RSVCs (cf. Mosel & Hovdhaugen 1992, Milner 1966 on weather-verbs in Samoan).

(361) a. *Sā agi le matagi / # le tama*
PST blow SPEC wind.ABS SPEC boy.ABS
'The wind/ #the boy blew.'

b. # *Sā agi fa'a-mamā e le matagi le laulau.*
PST blow CAUS-clean ERG SPEC wind SPEC table.ABS
'The wind cleaned the table by blowing (the leaves of the table).'

Likewise, anticausative or anti-agentive Type-B-RSVCs, such as English *break open* or Mandaring *xǐ-gānjìng* 'wash-clean', are ungrammatical (cf. section 3.1.3). Instead, agentless clauses are obligatorily interpreted as an instance of subject drop (cf. section 5.4.2.1 on subject drop in the context of Samoan ergative verbs).

(362) a. *Sā solo fa'a-mamā le laulau.*
PST wipe CAUS-clean SPEC table.ABS
'(Someone) wiped the table clean.'
'The table got wiped clean.'

b. *Sā tipi fa'a-nini'i le fasipovi.*
PST cut CAUS-small SPEC meat.ABS
'(Someone) cut the meat into small pieces.'
'The meat got cut small.'

More generally, the external argument of Type-B-RSVCs is interpreted to act highly volitionally and does not accidently cause the result state. This matches with the interpretation of external arguments of *fa'a*-causatives, which is restricted to volitional agents only (as discussed in section 5.3.3.2).

Regarding the internal argument, Type-B-RSVCs are not subject to transitivity matching, which has been described for other Oceanic languages (e.g. Berger 2020, Margetts 2005 on Saliba/Logea). However, as noted in the previous section, unergative verbs that do not have an internal argument are able to function as the V1 in Type-B-RSVCs. In this context, only the external argument is shared (cf. Ko & Sohn 2015 on Korean).

(363) % *Sā pese fa'a-ala~ala e Malia le pepe.*
PST sing CAUS-RED~awake ERG Maria SPEC baby.ABS
'Maria put the girl to sleep by singing.'

Whereas internal argument sharing does not seem to be a necessary condition for Type-B-RSVCs, the internal arguments of two transitive verbs must be shared. Therefore, it is not possible for the respective verbs to introduce an internal argument on their own (Mosel 2004). As a result, the internal argument of the V1 must be interpreted as the internal argument of V2.

(364) * *Sā lamu (pulu) fa'a-pa~pa'e e le teine nifo.*
PST chew gum(.ABS) CAUS-RED~bleach ERG SPEC girl tooth.PL.ABS
Intended: 'The girl cleaned her teeth by chewing gum.'

To express a meaning like that in (364), a bi-clausal construction is needed instead. Here, the causative result verb appears in a purpose clause attached to the manner verb predicate.

(365) *Sā lamu pulu le tama **e** fa'a-pa'e~pa'e ai ona nifo.*
PST chew gum.ABS SPEC boy GENR CAUS-RED~bleach ANAPH 3PL.POSS teeth.ABS
'The boy chewed gum so that he bleached his teeth.'

This argument matching condition is even stronger, as seen in both resultative secondary predication or the means construction in English, which allow the internal argument of

the manner verb to be syntactically or semantically projected as long as it is construed as an instrument (cf. chapter 3).

6.2.3 On the semantics of V1

The observation that the individual verbs keep their argument structure properties in Type-B-RSVCs carries over to the semantic contribution of the manner verbs. For some languages, it has been observed that lexical (manner) verbs can also function as light verbs in causative constructions (cf. Aboh 2015a, 2009, Bradshaw 2010b, 1982, Baker & Harvey 2010). However, (causative) light verbs typically differ from their lexical counterparts, in being semantically bleached and sometimes phonologically reduced (cf. Butt 2010). This does not hold true for the V1 in Samoan Type-B-RSVCs.

On the one hand, the semantic contribution of the verb in Type-B-RSVCs is equivalent to the lexical semantics outside of the construction. As noted in section 5.4.1.1, (causative) manner verbs of the *wash*- and *cut-&-break*-domain usually to a specific manner, in which the action is performed. This often correlates with restriction on the patient argument, which can participate in such actions. For example, the causative manner verb *fa'ī* 'break off' describes an action in which an agent performs "a pulling motion, to stress and twist something until the material is ruptured" (Collins 2010: 43). This action is typically performed on a small branch, but not on a whole tree.

(366) *Sā fa'ī e le tama le lālā. / # le la'au.*
PST break ERG SPEC boy SPEC branch.ABS SPEC tree
'The boy broke the branch/ # the tree.'

This same restriction is observed in Type-B-RSVCs, where when *fa'ī* 'break.off' is felicitous when the agent acts on a branch, but infelicitous when the agent acts on a tree. This observation suggests that *fa'ī* contributes the same meaning in both contexts.

(367) a. *Sā fa'ī fa'a-nini'i e le tama* ***le lālā.***
PST break CAUS-small ERG SPEC boy SPEC branch.ABS
'The boy make the branch small by breaking it.'

b. *# Sā fa'ī fa'a-pa'ū e le tama* ***le la'au.***
PST break CAUS-fall ERG SPEC boy SPEC tree.ABS
'The boy fell the tree by breaking it.'

Likewise, manner verbs in the *wash*-domain often refer to the instrument used to achieve the cleaning of an object. The verb, *fu~fulu*, for example, describes a washing action that

involves the use of soap. Therefore, it can be used with in a context of dish-washing, but not in the context of teeth-cleaning, unless it is about cleaning dentures. This restriction holds for Type-B-RSVCs, as indicated by the interpretation of the object *nifo* 'teeth'.

(368) *Sā fu~fulu fa'a-mamā e Malia nifo.*
PST RED~wash CAUS-clean ERG Mary teeth.ABS
'Mary cleaned the dentures (# her own teeth) by washing them with soap.'

Moreover, the initial slot is not limited to a restricted set of verbs. Instead, transitive manner verbs can productively occur in this position, even if they denote a closely related meaning. Again, this is illustrated by the *wash*-domain in (369) (cf. section 5.4.1.1).

(369) a. *solo fa'a-mamā* 'clean by wiping'
b. *fu~fulu fa'a-mamā* 'clean by washing (with soap)'
c. *tā fa'a-mamā* 'clean by hitting with a stick'
d. *salu fa'a-mamā* 'clean by sweeping'
f. *tafi fa'a-mamā* 'clean by brushing'

These patterns indicate that the V1 contributes the same meaning as outside of the construction, which is also a first indication that in Type-B-RSVCs, the causative V1 qualifies as a lexical verb, and not as light verb,.

6.2.4 Summary

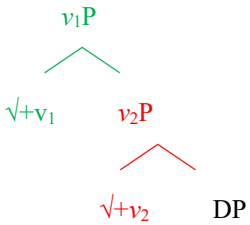
To summarize, this section demonstrates that the individual predicates maintain their argument structure and their lexical meaning in Type-B-RSVCs. Therefore, Type-B-RSVCs cannot form anticausative variants as they necessarily combine with an agentive external argument. However, while the external argument must be shared, internal argument sharing is not obligatory as unergative verbs can appear in the manner-denoting V1 position. Regarding the distribution of verb classes, manner and result verbs were expected to be in a complementary distribution. Although this generalization holds true for the result denoting V2 position, which is restricted to *fa'a*-causatives only, the V1 position is subject to greater flexibility as causative result verbs can appear in this position. Nevertheless, (causative) manner verbs proto-typically function as the V1.

6.3 On the adjunct-status of V1

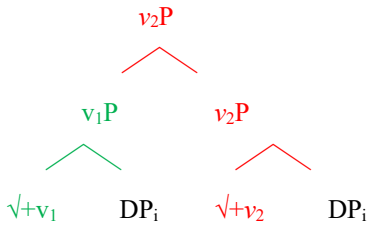
Based on the distribution of verb classes in Type-B-RSVCs in Samoan, this section focuses on the morphosyntactic type of composition. As already mentioned in section 1.1.4,

(R)SVCs have been argued to be derived by various morphosyntactic structures, which are: complementation (370)a, adjunction (370)b as well as complex head formation (370)c and root-compouding (Zimmermann & Amaechi 2020 inter alia, Liu 2019, Ko & Sohn 2015, Baker & Stewart 2002, Collins 1997, Déchaine 1993). In addition, for some languages, such as Gungbe, it has been shown that the causing-event denoting V1 functions as a light verb (Aboh 2009). In this case, Type-B-RSVCs would resemble periphrastic causative construction, as discussed in section 2.4. The different syntactic configurations are given below, where I abstract away from the exact position of the internal argument.

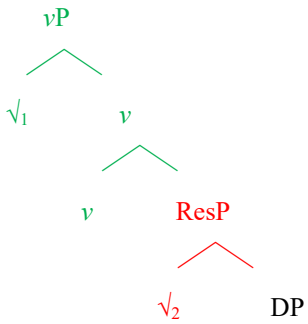
(370) a. **Complementation:**



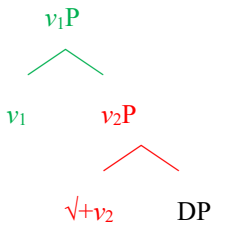
b. **Adjunction:**



c. **Complex head formation:**



d. **Light verb construction:**



To investigate the type of morphosyntactic composition of Samoan Type-B-RSVCs, I first turn to the morphosyntactic complexity of the manner V1. Based on evidence from reduplication, adverbial modification and semantic contribution, I show that the V1 shows the characteristics of lexical verbs, which are structurally independent from the causative V2. As a result, I suggest that each verb in Samoan Type-B-RSVCs forms its own *v*P, ruling out root compounding and light verb constructions as potential underlying morphosyntactic structures (section 6.3.1)

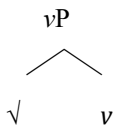
However, as the lexical status of both V1 and V2 is compatible with complementation and adjunction structures, I apply additional diagnostics that indicate that the manner V1 is structurally adjoined to the causative V2. Crucial evidence comes from a narrow reading of the repetitive modifier *toe* 'again', the presence of causative morphology on

the V2 and the case alignment of arguments in the context of an unergative V1. Consequently, Type-B-RSVCs do not instantiate complementation structures, such as resultative secondary predication, but appear to be related to the means construction (section 6.3.2).

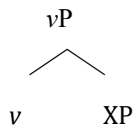
6.3.1 The morphosyntactic complexity of V1

In this section, I investigate the morphosyntactic complexity of the manner V1 in Samoan Type-B-RSVCs. As indicated above, this question relates to the morphosyntactic size of the respective verbs. While *fa'a*-causatives have been shown to be morphologically complex, involving (at least) a root and two event-introducing *v* heads, the morphosyntactic status of the V1 has not been sufficiently analyzed yet. The predicted options relate to a number of independent lexical elements, i.e. roots, in the morphosyntactic structure of the V1, are shown in (371). On the one hand, if the V1 forms a separate lexical verb on its own, the manner root combines with its own verbalizing *v* head (371)a. On the other hand, if the V1 is a light verb, it directly merges as the *v*, taking the V2 as a complement (371)b (Aboh 2009, Folli et al. 2005). Lastly, if both verbs form a complex head, both roots merge to the same verbalizer (Liu 2019). Note, however, that complex head formation is already ruled out by the complex structure of *fa'a*-causatives, and also violates the constraint that a single categorizer can only categorize a single root (cf. section 1.1.1).

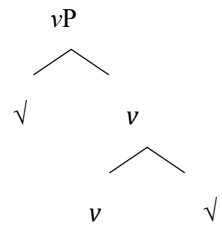
(371) a. **lexical verb:**



b. **light verb:**



c. **complex head:**



In the following sections, I present evidence from reduplication, adverbial modification and lexical semantics, that speak in favor of a lexical status of the manner V1.

6.3.1.1 Reduplication

Samoan exhibits two types of verbal reduplication – partial and full – that instantiate various morphosyntactic and semantic functions which are primarily connected to an abstract concept of plurality. On the one hand, full reduplication indicates either the pluractionality in the context of an activity, or the intensification of state (Zuraw et al. 2014, see Mosel & Hovdhaugen 1992 for an overview of the various functions of reduplication).

In the examples in (372), the reduplication stresses that the action denoted by the verbs is carried out multiple times. Note that full reduplication may also affect the lexical semantics of a verb. In (372)b, *mili~mili* denotes a 'gentle rubbing', i.e. caressing, whereas the non-reduplicated form implies that more force is involved.

(372) a. *Sā solo~solo e le tama le laulau*
PST RED~wipe ERG SPEC boy SPEC table.ABS
'The boy wiped the table.'

b. *Sā mili~mili e le teine le pepe*
PST RED~rub ERG SPEC girl SPEC baby.ABS
'The girl caressed the baby.'

In the context of a stative verb, full reduplication intensifies the state or indicates that the state denoted by the verb is still ongoing (373).

(373) *Sā moe~moe le pepe.*
PST RED~sleep SPEC baby.ABS
'The baby was sleeping deeply.'

In Type-B-RSVCs, the two verbs can be reduplicated individually. Therefore, the V1 and V2 show reduplication either separately or simultaneously. Significantly, the reduplication only scopes over the reduplicated verb, as illustrated in (374).

(374) a. *Sā solo~solo fa'a-mamā e le teine le laulau.*
PST RED~wipe CAUS-clean ERG SPEC girl SPEC table.ABS
'The girl cleaned the table by wiping it.' (repetitive 'wiping'-actions)

b. *Sā pese fa'a-moe~moe e le teine le pepe.*
PST sing CAUS-RED~sleep ERG SPEC girl SPEC baby.ABS
'The girl put the girl to sleep by singing.' (sleeps deeply)

c. *Sā mili~mili fa'a-moe~moe e le teine le pepe.*
PST RED~rub CAUS-RED~sleep ERG SPEC girl SPEC baby.ABS
'The girl put the baby to sleep by caressing it.' (rep. gentle 'rubbing'-actions; sleeps deeply).

On the other hand, partial reduplication primarily marks number agreement with the absolutive argument of the clause (Zuraw et al. 2014, cf. Mosel & Hovdhaugen 1992 on the various functions of partial agreement, but see Homer 2009 for examples with subject agreement). This is illustrated below where the verb agrees with either the subject of an intransitive clause (375)a or the object of an transitive clause (375)b by the reduplication of its stressed syllable.

(375) a. *Sā mo~moe ʻu~ʻumi tamaiti.*
PST RED.PL~sleep RED.PL-long children.ABS.PL
'The children slept long.' (Mosel & Hovdhaugen 1992: 400)

b. *ʻUa nu~nuti e le tama fuāmoa.*
INCH RED.PL~smash ERG SPEC boy egg.ABS.PL
'The boy has smashed the eggs.' (Mosel & Hovdhaugen 1992: 443)

However, only a subset of verbs allows for plural marking via partial reduplication, where it applies to roots, but not affixes. Thus, partial reduplication is only available for verbs embedded under the causative prefix *faʼa-*, as shown in (376) where *mo~moe* 'sleep' agrees with the absolutive plural object *pepe* (Zuraw et al. 2014, Mosel & Hovdhaugen 1992).

(376) *Sā mili~mili faʼa-mo~moe e Malia pepe.*
PST RED~rub CAUS-RED~sleep ERG Mary baby
'Mary put the babies to sleep by caressing them.'

In Type-B-RSVCs, both the V1 and the V2 can be sensitive to number agreement with the absolutive object. In (377), the initial verbs *solo* 'wipe' and *vali* 'paint' can be partially reduplicated, but the embedded predicates *mamā* 'clean' or *mūmū* 'red' cannot. Therefore, plural agreement shows up on the initial predicate only.

(377) a. *Sā sō~solo faʼa-mamā e Malia laulau.*
PST RED.PL~wipe CAUS-clean ERG Mary table.ABS.PL
'Mary cleaned the tables by wiping them.'

b. *Sā va~vali faʼa-mūmū e Pita fale.*
PST RED.PL~paint CAUS-red ERG Peter house.ABS.PL
'Peter made the houses red by painting them.'

In (378), full reduplication blocks plural agreement on the initial predicate, whereas the embedded predicates *moe* 'sleep' and *paʼū* 'fall' show plural agreement with the object.

(378) a. *Sā mili~mili faʼa-mo~moe e Malia pepe.*
PST RED~rub CAUS-RED~sleep ERG Mary baby.ABS.PL
'Maria caressed the babies to sleep.'

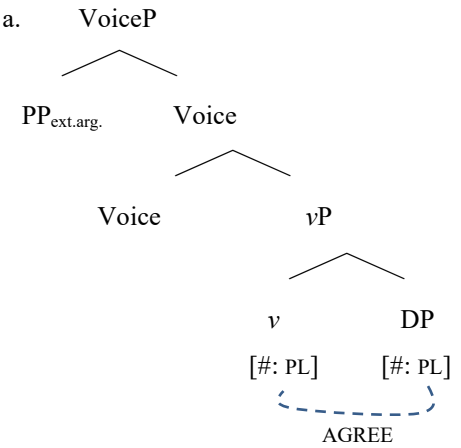
b. *Sā tipi~tipi faʼa- pa<ʼū>ʼū e Pita laʼau.*
PST RED~cut CAUS-<RED>fall ERG Peter tree.ABS.PL
'Peter fell the trees by cutting them.'

However, if both verbs are eligible for partial reduplication, plural objects are cross-referenced on both manner V1 and causative V2 (379).

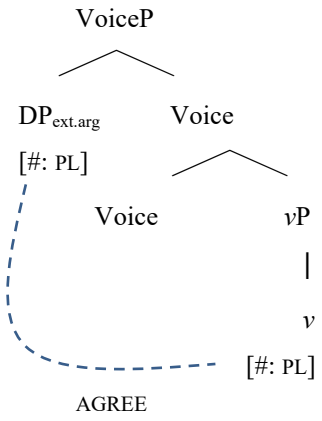
(379) *Sā* *ti~tipi* *fa'a-pa<'ū>'ū* *e* *Pita* *la'au.*
PST RED.PL~cut CAUS-<RED>fall ERG Peter tree.ABS.PL
'Peter fell the trees by cutting them.'

The observation that the two predicates can be reduplicated separately suggests that each verb is independently accessible for morphosyntactic processes. In Distributed Morphology, reduplication is interpreted as the spell-out of functional heads within the syntactic derivation (Haugen 2011, Travis 2001, Raimy 2000, Marantz 1982 among others). For Samoan, Thornton (2019) argues that a verbal number feature, responsible for both event and participant number, is located on *v* (see Zimmermann to appear, Haji-Abdolhosseini et al. 2002 on Niuean, cf. Bobaljik & Harley 2017, Toosarvandani 2016, Bobaljik 2012, Laca 2006, Borer 2005a). Therefore, *v* carries an uninterpretable number feature [*u*#:__], which agrees with its closest DP-argument.[86]

(380) a.



b.



Support for this assumption comes from the observation that full reduplication is sensitive to the type of eventuality and can also affect the lexical semantics of the root. In addition, if reduplication is a spell-out of *v*, then the presence of causative morphology blocks reduplication, because the head is already spelled-out as *fa'a-*. Consequently, separate reduplication in the context of Type-B-RSVCs suggests that (i) each verb merges to a separate categorizing *v* head, and (ii) the V1 is a lexical verb, as functional elements do not appear to reduplicate in Samoan (see also section 8.2.2.1 on Daakaka).

[86] Note that Thornton (2019) introduces the locality condition to account for absolutive agreement in Samoan. If this is correct, it predicts that middle verbs agree with the accusative marked internal argument instead of the absolutive marked external argument. This contrasts with the generalization that number agreement is absolutive-based (Mosel & Hovdhaugen 1992).

6.3.1.2 Adverbial modification

In Samoan, adverbial manner modification is realized by post-verbal adverbial particles (Collins 2017, Mosel 2004, Mosel & Hovdhaugen 1992). This is shown in (381), where the manner adverbials appear immediately after the verbal predicate.

(381) a. *'Ua sau* ***vave*** *le teine*
INCH come quickly SPEC girl.ABS
'The girl came quickly.' (Collins 2017: 20)

b. *Sā moe* ***'umi*** *le tama.*
PST sleep long SPEC boy.ABS
'The boy slept long.' (Mosel 2004: 278)

c. *Sā solo* ***vave*** *e le teine le laulau.*
PST wipe quickly ERG SPEC girl SPEc table.ABS
'The girl quickly wiped the table.'

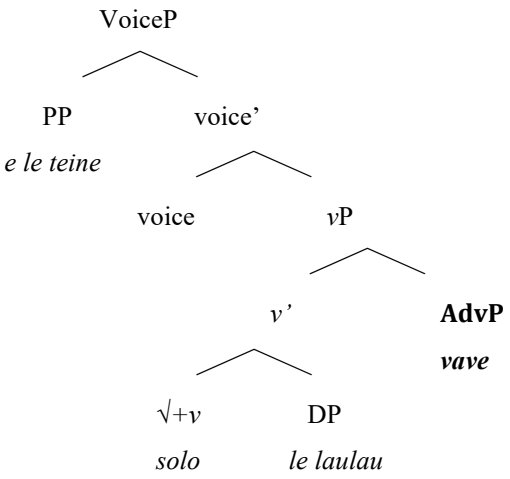
Structurally, these adverbial particles have been identified to be located within the VP, as they undergo movement with the VP to a clause initial position. Therefore, adverbial particles mark the right edge of the VP (Collins 2017).

(382) * *'Ua sau le teine* ***vave****.*
INCH come SPEC girl.ABS quickly
'The girl came quickly.' (Collins 2017: 20)

This pattern is shared by a number of verb-initial Polynesian and Oceanic languages (van Urk 2019a on Imere, Ball 2017 on Tongan, Massam 2013 on Niuean, Milner 1972 on Fijian, also Rackowski & Travis 2000 on Malagasy).

Cross-linguistically, it is assumed that manner verbs merge low in the derivation to the *v*P, where they are licensed by Voice (Alexeyenko 2015, Alexiadou 1997, cf. Ernst 2002, Cinque 1999). While in languages such as English, manner adverbials may subsequently move to Spec, VoiceP, adverbial particles in Polynesian languages are spelled-out in their *v*P-internal position (van Urk 2019a, Collins 2017, Massam 2013).

(383)



In the context of Type-B-RSVCs, manner adverbial particles can appear in two positions, appearing either after the V1 or after the whole SVC. Although the semantic difference is rather subtle, the position of the adverbial appears to influence its scope. In the RSVC final position, the adverbial particle (here: *vave*: quick) scopes over the complex event denoted by the RSVC.

(384) *Sā solo fa'a-mamā* ***vave*** *e le teine le laulau.*
PST wipe CAUS-clean quickly ERG SPEC girl SPEC table
'The girl quickly cleaned the table by wiping it.'

In the RSVC medial position, the particle scopes over the V1 only. In (385), *vave* 'quick' stresses that it was the wiping that was performed in a 'quick' manner. [87]

(385) *Sā solo* ***vave*** *fa'a-mamā e le teine le laulau.*
PST wipe quickly CAUS-clean ERG SPEC girl SPEC table
'The girl cleaned the table by wiping it quickly.'

The availability of a medial position of manner adverbial particles in Type-B-RSVCs indicates that both verbs are accessible for adverbial modification. This indicates that both verbs are phrasal XPs, and not just a root or a verbal head.

Yet, adverbial modification is still compatible with light verbs constructions. As shown in section 2.4, the causing event introduced by causative light verbs in periphrastic causative construction is accessible for independent adverbial modification (Martin &

[87] There was some variation in the speakers' judgements on adverbial modification in Type-B-RSVCs, with some speakers strongly preferring a bi-clausal construction that involves a purpose clause (i). Note that the attachment of *fa'a-* to the post-verbal particle implies a higher degree of 'fastness' (cf. Read 2010).
(i) *Sā solo fa'a-vave /fa'a-tope~tope le laulau ia mamā.*
PST wipe CAUS-quick CAUS-RED~fast SPEC table.ABS SUBJ clean
'S/he quickly wiped the table so that it is clean.'

Schäfer 2014, Pylkkänen 2008, Fodor 1970). In English periphrastic causatives, for example, the manner adverb *slowly* can either refer to the causing event performed by John or to the actual sinking of the ship.

(386) a. *John **made** the ship sink **slowly**.*
b. *John made the ship **sink slowly**.* (Martin & Schäfer 2014: 220)

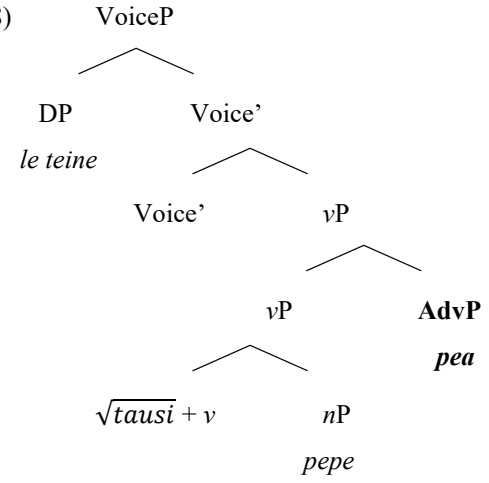
However, the SVC-medial position of manner adverbials in Type-B-RSVCs is unexpected under a light verb analysis, based on the relative position of complements and adverbial particles in Samoan. As pointed out by Collins (2017), PNI-ed objects appear in between the root and the adverbial particle (387).

(387) a. *Sā tausi pepe **pea** le teine*
PST care baby continually SPEC girl.ABS
'The girl went on taking care of the baby.'

b. * *Sā tausi **pea** pepe le teine*
PST care continually baby SPEC girl.ABS
Intended: 'The girl went on taking care of the baby.'(Collins 2017: 12)

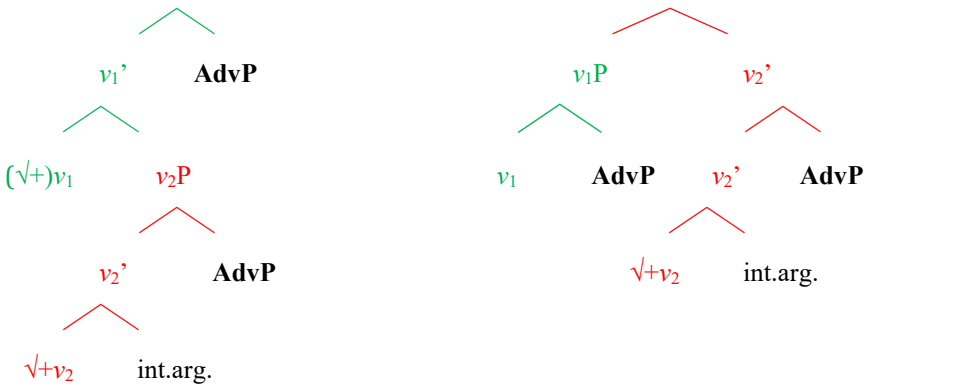
As both PNI-ed objects and adverbial particles are not subject to movement, the ungrammaticality of (387)b shows that adverbial particles are merged higher than the internal argument (see section 5.2.3 on Samoan VSO order; Collins 2017, cf. van Urk 2019a).

(388)



If V2 were in the complement position of a functional V1, it would merge in the same position as the PNI-ed object in (388). In this configuration, both V1 and V2 could be modified by an adverbial particle separately, but would occur in the same SVC-final position on the surface structure – as in English periphrastic causatives (389)a. In contrast, an SVC-medial position is only available if the V1 is adjoined to the V2 (389)b.

(389) a.* v_1P COMPLEMENTATION b. v_2P ADJUNCTION



Therefore, adverbial modification provides further evidence for the lexical status of V1.

6.3.1.3 On the lexical status of V1

The results of the investigation on reduplication and adverbial modification in the context of Type-B-RSVCs demonstrate that the manner V1 can be identified as a lexical verb. This supports the observations made in the previous section. In section 6.2.1.1, I have shown that the V1 in Type-B-RSVCs can be realized by a causative verb, including causativizing morphology, such as reduplication in (390). If the V1 were to merge as a light verb, additional causative morphology would be highly unexpected, given that the V1 would be the spell-out of the same causing-event introducing head.

(390) *Sā lo~lo'u fa'a-ma-tala e Pita puipui u'amea o le fa'amalama*
PST RED~bend CAUS-STAT-open ERG Peter bars.ABS metal GEN SPEC window
'Peter opened the window by bending the metal bars.'
(lit.: 'Peter opened the metal bars of the window by bending them.'

Furthermore, in section 6.2.3, I have demonstrated that the lexical semantics of the V1 are not semantically bleached in comparison to its lexical counterpart. However, semantic bleaching, or at least a semantically vague meaning, has been commonly identified as being one of the characterizing properties of light verbs (Aboh 2015a, Bradshaw 2010b, Butt 2010, Folli et al. 2005 inter alia).

Consequently, the manner V1 can be analyzed based on the converging evidence of various independent diagnostics, as summarize in Table 9. In addition, the SVC-medial position of adverbs already suggests that Type-B-RSVCs are derived via adjunction.

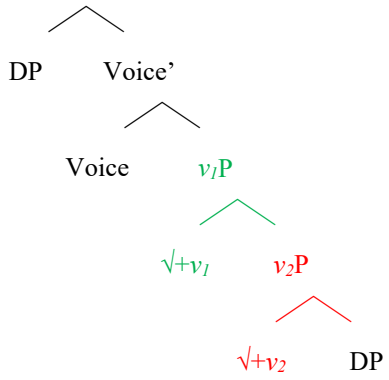
	Complex Head	**Causative Light verb**	***v*P-*v*P complement.**	***v*P-*v*P adjunction**	**Type-B-RSVCs**
Morphological complex V2	No	Yes	Yes	Yes	Yes
Semantically equivalent to lexical use	(No) idiosyncratic meaning	(No) semantically bleached	Yes	Yes	Yes
Reduplication of V1 only	No	No	Yes	Yes	Yes
SVC-medial position of manner adverbs	No	No	No	Yes	Yes

Table 9: Morphosyntactic diagnostics for the type of syntactic composition in Type-B-RSVCs in Samoan.

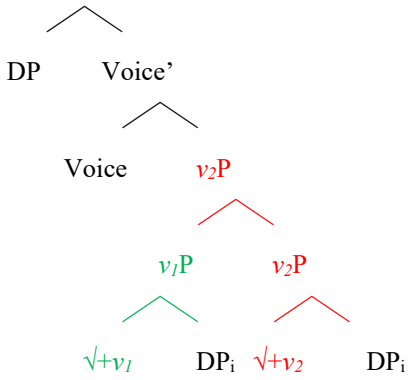
6.3.2 Adjunction vs. complementation

Building on the lexical status of the initial predicate, this section focuses on the type of morphosyntactic composition in Type-B-RSVCs. As discussed in chapter 3, we expect resultative semantics to be derived by either adjunction or complementation structures. If Type-B-RSVCs were an instance of resultative secondary predication, the causative V2 would appear in the complement position of the V1 (391)a. In contrast, if Type-B-RSVCs were an instance of means construction, the manner V1 would be structurally adjoined to the causative V2 (391)b. As highlighted before, the two types of resultative construction differ primarily with respect to the matrix verb status of the respective verbs, as in resultative secondary predication, the manner verb functions as the matrix verb, whereas in means constructions, causative verbs function as the matrix verbs. Notably, both types of composition have been discussed in the context of RSVCs with causative result denoting predicates (for example, Collins 2002 on ǂHoan, Ko & Sohn 2015 on Korean; cf. section 3.3.3 for an overview).

(391) a. COMPLEMENTATION



b. ADJUNCTION



By applying morphosyntactic and semantic diagnostics, I demonstrate that the causative V2 is the matrix verb of Samoan Type-B-RSVCs. Evidence for this assumption comes from a narrow reading of the repetitive modifier *toe* 'again', the presence of the causative prefix *fa'a-* on the V2 and ergative case marking in the context of unergative V1s.

6.3.2.1 Narrow scope of toe 'again'

A first diagnostic for the internal structure of complex predicates comes from repetitive modifiers, such as *again*. As demonstrated in section 3.1.1 and 3.2.1, complementation differs from adjunction in licensing only a restitutive and a repetitive reading that takes wide scope over the whole complex predicate (Beck & Snyder 2001b). In this context, *again* does not exhibit narrow scope solely over over the manner matrix predicate. This is shown for the English resultative secondary predication in (392), where the result state is necessarily presupposed under either reading.

(392) *Peter (again) wiped the table clean (again).*

a. ... *and the table was clean before.* RESTITUTIVE

b. ... *and he wiped the table clean before.* REPETITIVE (WIDE)

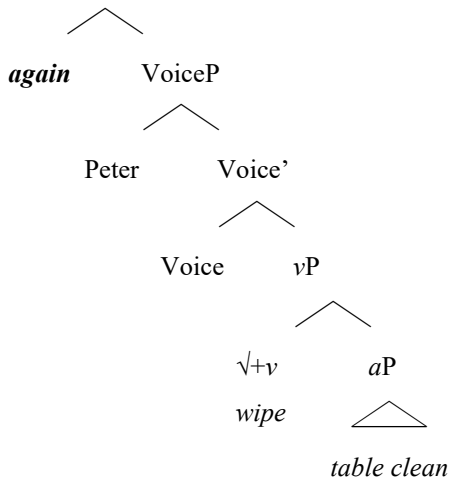
c. # … *and he wiped the table before.* REPETITIVE (NARROW)

By adopting a structural analysis of *again*, the syntactic position of 'again' determines the respective readings of the repetitive modifier.[88] Based on the constraint that allows 'again' to attach only to propositional nodes, it adjoins high to VoiceP or low to the *a*P (Lechner et al. 2015, Bale 2007, Beck 2005, von Stechow 1996).[89]

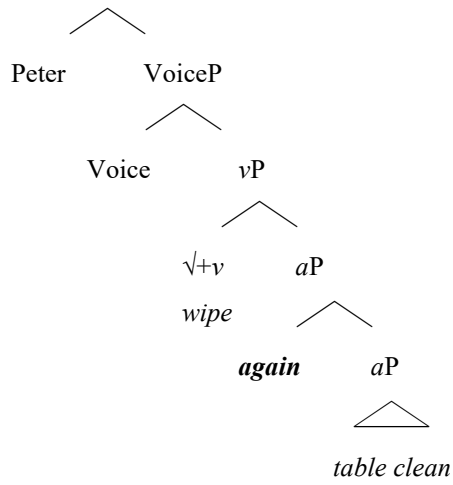
[88] An alternative account attributes the ambiguity of *again* to its lexical semantics in that *again* is polysemous, moving between a repetitive and a restitutive meaning (Pedersen 2015 among others, Fabricius-Hansen 2001, Jäger & Blutner 2000, Kamp & Rossdeutscher 1994, Dowty 1979).

[89] In that, *again* differs from other repetitive modifiers, such as English *re-*, which have been argued to attach directly to verbal heads V^0, as *re-* does not license a restitutive reading in resultative secondary

(393) a. REPETITIVE



b. RESTITUTIVE



If *again* attaches low, *again* only takes in its scope the state denoted by the *a*P, i.e. it introduces the presupposition that the table was clean before.

(394) a. ⟦again⟧(aP) = again (λs. clean (s) ∧ Holder(table, s))
b. Presupposition: ∃s'. s'<s ∧ clean(s') ∧ Holder(table, s')

If *again* attaches high, it takes the whole VoiceP as argument scoping over both subevents. Therefore, it introduces the presupposition that there was a prior wiping-event performed by Peter that caused the table to become clean. Therefore, the restitutive reading is asymmetrically entailed by the repetitive reading, which makes a narrow repetitive of the causing event unavailable (Lechner et al. 2015).

(395) a. ⟦again⟧(VoiceP) = again (λe.∃s. wipe(Peter, e) ∧ Caus(e,s) ∧ clean(the table, s))
b. Presupposition: ∃e'.∃s'. e'<e ∧ Ag (Peter, e') ∧ wipe(e') ∧ Caus(e',s')
∧ clean(s') ∧ Holder (table, s')

This contrasts with the readings available in adjoined structure, like means constructions. If *again* appears in the adjoined predicate, an additional narrow repetitive reading becomes available.

(396) *Peter cleaned the table again by wiping it again.*

In (396), *again* presupposes only that Peter wiped the table before, but not that this wiping caused the table to become clean.

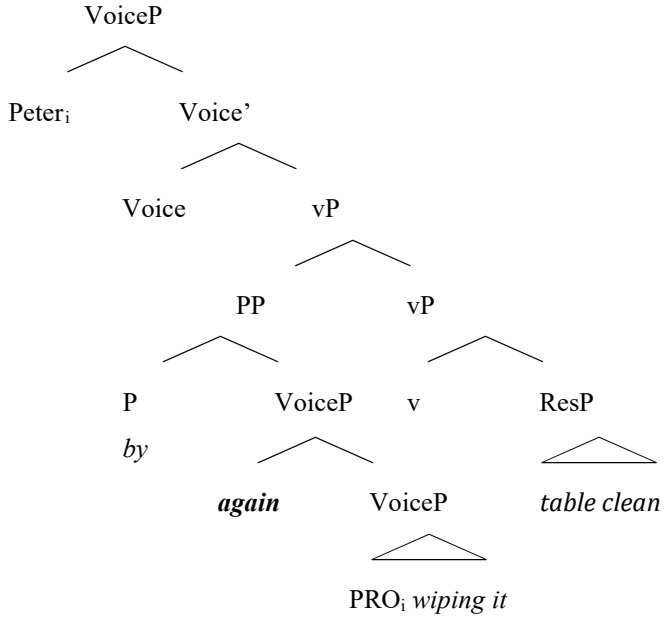
predication (E. Williams 2014, cf. Lechner et al. 2015, Marantz 2009). For example, the sentence in (i) does not presuppose that the bureau was painted white before.
(i) *John re-painted the bureau white.* (E. Williams 2014: 300)

(397) a. ⟦again⟧(VoiceP$_{ADJUNCT}$) = again (λe.∃s. wipe(Peter, e) ∧ Caus(e,s) ∧ clean(the table, s))

b. Presupposition: ∃e'. e'<e ∧ wipe(PRO, e') ∧ Pat(table, e')

Under structural analysis, the narrow reading of *again* arises if *again* is merged within the adjoined means *by*-phrase, as in this position it does not c-command over the result-denoting constituent, i.e. ResP.

(398)



Therefore, the availability of a narrow reading of repetitive modifiers such as *again* distinguishes adjunction from complementation structures. By applying this diagnostic to Samoan Type-B-RSVCs, the Samoan counterpart *toe* 'again' license both a repetitive and restitutive reading, as already shown for causative predicates in section 5.4.2.2 (cf. Hohaus 2016). In the examples in (399), the context forces a repetitive reading of *toe* 'again', which presupposes both the causing event and the result state.

(399) a. Peter and his family were having breakfast at their kitchen table. After the breakfast, the table was full of crumbs, so Peter wiped the table clean. A few minutes later, one of his children spilled some juice over the table. So, Peter wiped the table clean again.

Sā toe solo~solo fa'a-mamā e Pita le laulau.
PST again RED~wipe CAUS-clean ERG Peter SPEC table.ABS
'Peter again cleaned the table by wiping it.'

b. Mary has a small baby boy. One evening, Mary sat down on his bed and sang the boy to sleep. After the boy fell asleep, Mary stood up and left the room. Unfortunately, the baby woke up as Mary was closing the door too loudly. Mary came back in and sang the baby back to sleep.

% *Sā toe pese~pese fa'a-moe~moe e Malia le pepe.*
PST again RED~sing CAUS-RED~sleep ERG Mary SPEC baby.ABS
'Mary again put the baby to sleep by singing (a song).'

In comparison, the context for the examples in (400) prevents a repetitive interpretation, as the causing action is performed on the patient for the first time. Yet, *toe* is felicitous in these contexts, as it licenses a restitutive reading in resultative contexts (cf. Beck & Snyder 2001b for a cross-linguistic overview of restitutive reading 'again').

(400) a. Peter bought a new table from the shop. At home, he puts the new table in his living room. It is spotlessly clean. After dinner, the table was very dirty as it is full of crumbs and sauce. Therefore, Peter wipes the table clean again.

Sā toe solo~solo fa'a-mamā e Pita le laulau.
PST again RED~wipe CAUS-clean ERG Peter SPEC table.ABS
'Peter cleaned the table again by wiping it.'

b. Today, Mary gave birth to a baby. Shortly after birth the baby fell asleep. After the baby woke up again, it was crying a lot. After feeding her baby, Mary sang the baby back to sleep.

% *Sā toe pese~pese fa'a-moe~moe e Malia le pepe.*
PST again RED~sing CAUS-RED~sleep ERG Mary SPEC baby.ABS
'Mary put the baby to sleep again by singing (a song).'

Crucially, Samoan Type-B-RSVCs allow an additional narrow repetitive reading, in which *toe* 'again' only scopes over the causing event (contra resultative secondary predication). This is illustrated by the examples in (401). In (401)a, Peter's initial wiping action does not cause a change in the cleanliness of the table whereas his second wiping-action does. Note that the table was already dirty when Peter bought the table. Therefore, a restitutive reading is ruled out as well. This is even more clear in (401)b where the initial singing-action does not include a patient argument. Moreover, as the baby has just been born, it cannot have been asleep before. [90]

[90] An important argument for the structural analysis of *again* is the sensitivity of *again* to word order (Lechner et al. 2015, von Stechow 1996). In Samoan, *toe* 'again' always occurs in a fixed preverbal position (Mosel & Hovdhaugen 1992). With the assumption that preverbal adjectives such as *toe* attach to the left of the predicate, the low position of the adverb in the restitutive reading raises the question as to how the surface order is derived. As it occurs in the same slot as other aspectual adverbs and restructuring verbs (such as *fia* 'want' or *tāi* 'almost'), *toe* may move from a VP-internal position to a higher aspectual head that licenses repetitive semantics (cf. Cinque 1999 for the idea of repetitive aspectual projections, Alexiadou 1997 on the movement of temporal modifiers out of the VP, also Hohaus 2016 of a high position of Samoan *toe* 'again'). In general, more research is needed to better understand repetitive markers in Samoan and Oceanic (cf. Moyse-Faurie 2012, Lichtenberk 1991).

(401) a. Peter bought a new table from the shop. At home, he realized that the table had some marks on it. Before he returned the table to shop, he tried to clean it first. He took a cloth and wiped the table, but the table didn't get any cleaner. Therefore, he got himself some cleansing agent and put it on the cloth. He wiped the table again and now it became clean.

Sā toe solo~solo fa'a-mamā e Pita le laulau.
PST again RED~wipe CAUS-clean ERG Peter SPEC table.ABS
'Peter cleaned the table by wiping it again.'

b. Peter and Mary were expecting a baby. At the hospital, Mary gave birth in the delivery room, while Peter was waiting outside. To kill time, he sang a song. After the baby was born, Peter entered the room and took the baby proudly in his arms. Since his birth, the baby was crying the whole time. To put it to sleep, Peter started singing again. Surprisingly, the baby fell asleep after a short while.

% *Sā toe pese~pese fa'a-moe~moe e Pita le pepe.*
PST again RED~sing CAUS-RED~sleep ERG Peter SPEC baby.ABS
'Peter put the baby to sleep by singing again.'

Therefore, in the context of Type-B-RSVCs *toe* 'again' can take the manner V1 in scope, without presupposing that the previous action caused the result state denoted by the causative V2.

(402) a. $[\![\text{again}]\!](v_1P) = \text{again}(\lambda e.\ \text{sing}(e))$
b. Presupposition: $\exists e'.\ e' < e \wedge \text{sing}(e')$

As a narrow repetitive reading of *toe* 'again' is only expected in adjoined structures, the availability of such a reading provides evidence for an adjunction analysis of Type-B-RSVCs in Samoan.

6.3.2.2 Causative morphology

The presence of the causative prefix *fa'a-* provides additional support for an adjunction analysis. As demonstrated in section 5.3, *fa'a-* is the contextually determined spell-out of an eventive *v* head in a causative configuration under Voice.

(403) $[v_{<e>}] \leftrightarrow$ *fa'a-* / $[_{\text{VoiceP}}$ Voice $[_{vP}$ ___ $vP_{<e/s>}]]$

Crucially, it has been shown that contextual allomorphy is subject to locality conditions (cf. Moskal 2015, Marantz 2013b, Arregi & Nevins 2012, Bobaljik 2012, Embick 2010, Carstairs-McCarthy 1992, Allen 1979, Siegel 1978 and many more).

To account for such locality conditions, various constraints have been proposed in the literature in terms linear adjacency (Embick 2010), structural adjacency (Bobaljik 2012) or hyper-contextual rules (Moskal 2015; see section 8.2.2.3 for a detailed discussion of the approaches). Since prefixal *v* and suffixal Voice morphology is not concatenated in the spell-out, linear adjacency cannot capture the allomorphic realization of the causing event-introducing $v_{<e>}$ as *fa'a-* in causative context under Voice (404) (cf. section 5.3.3.3).

(404) $v_{<e>}^\frown v_{<s>}^\frown\sqrt{root}^\frown$Voice

In contrast, both structural adjacency and accessibility domains can account for the observed allomorphic pattern, as Voice dominates the causing event introduce $v_{<e>}$ directly (403). However, based on the assumption that Type-B-RSVCs contain only a single Voice head (see section 6.4.3 for arguments in this direction), the questions arise as to how Voice is able to trigger causative morphology on the V2.

In a complementation structure, such as in (407) a below, both v_1 and v_2 are in the same spell-out domain under VoiceP. Yet, Voice and the lower v_2 head are not structurally adjacent as the higher v_1 intervenes (Bobaljik 2012). Under the assumption that both v_2 undergoes head movement via v_1 Voice to form a complex head, Voice and v_2 would not be adjacent as v_1 still intervenes (Arregi & Pietraszko 2020, Baker 1988, 1985, Travis 1984; but see Collins 2002 for an alternative proposal where both v_1 and v_2 directly merge with Voice).

(405) [Voice+$\mathbf{v_1}$+ v_2]

Under Moskal's (2015) proposal of hyper-contextual rules, contextual allomorphy may take place across functional nodes if the intervening node is part of the allomorphic condition that determines the spell-out of the respective head even if the intervening head is overtly spelled-out (406) (cf. Merchant 2015 for a related spanning approach on contextual allomorphy).

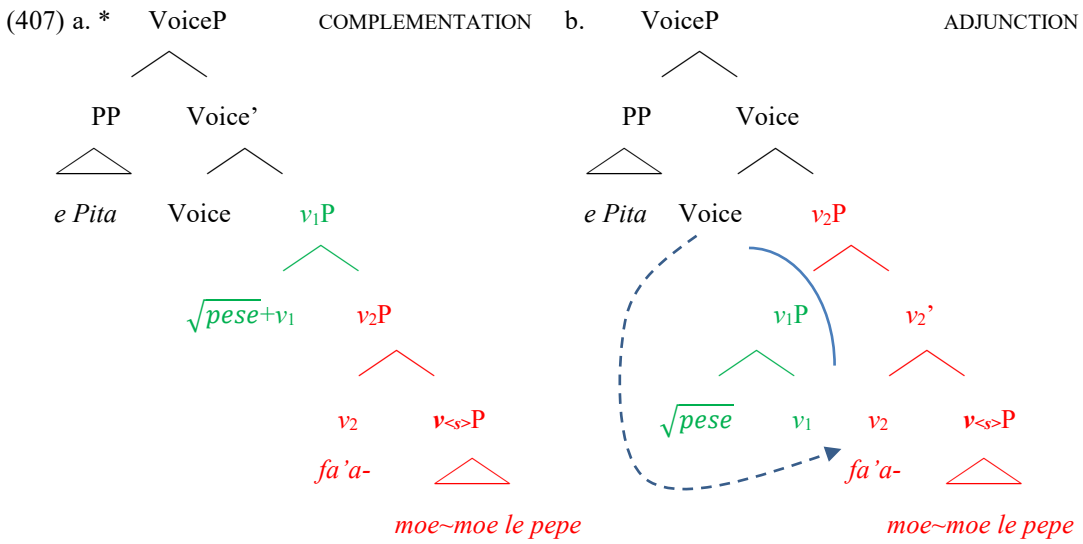
(406) $[X^0] \leftrightarrow$ a / _] **Y**] **Z**]
$[X^0] \leftrightarrow$ b

However, there is doubt that a hyper-contextual rule can account for the presence of causative morphology in Type-B-RSVCs in Samoan. On the one hand, I have shown in section 5.3.4 that the spell-out of $v_{<e>}$ in bi-eventive contexts under Voice is not determined by the presence of an intervening $v_{<e>}$ head outside of Type-B-RSVCs. This means that the

presence of the higher $v_{<e>}$ in Type-B-RSVCs does not have any impact on the spell-out of the lower $v_{<e>}$, contra to what appears to be implied by Moskal (2015).

On the other hand, it has been argued that allomorphy is restricted to (structurally complex) X^0 heads only with intervening phrasal nodes blocking a contextually determined spell-out. This constraint is violated by Samoan Type-B-RSVCs as adverbial particles can occur in an SVC-medial position of Type-B-RSVCs in Samoan modifying the manner V1 only (see section 6.3.1.2). Based on the fact that PNI-ed objects intervene with the verb and adverbial particles, adverbial particles are not incorporated into the verb, as suggested by Rivero (1992) for Greek. Therefore, the presence of SVC-medial adverbials strongly suggests that V1 and V2 do not form a single but complex head.[91]

In contrast, if the manner v_1P is adjoined to the causative v_2P as in (407)b, the structure inside v_1P is opaque for head movement (i.e. General Head Movement Constraint; Arregi & Pietraszko 2020, Baker 1988, 1985, Travis 1984). Consequently, v_1 does not intervene in Voice and v_2, as it violates structural adjacency conditions and v_2 triggers the spelled out of the causative v_2 as *fa'a-*. To derive the surface order of V1 preceding V2, I propose that Voice undergoes Voice-to-*v* lowering (Arregi & Pietraszko 2020, Bobaljik & Harley 2017, Embick & Noyer 2001). Note that this is proposal is also in line with structural adjacency and hyper-contextual rules.



[91] Further evidence against complex head formation comes from parentheticals. Collins (2017) shows that parentheticals can be inserted between the individual verbs of Type-B-RSVCs (i) which would be unexpected if the manner V1 and causative V2 were to form a single, complex head.

(i) *Sā* [*tapena* ***(e mo'i lo'u tala)*** *fa'a-mamā*] *e le teine le ta'avale.*
PST tidy GENR true 1SG.POSS story.ABS CAUS-clean ERG SPEC girl SPEC car.ABS
'The girl cleaned the car (this is totally true) spic and span.' (Collins 2017: 21)

6.3.2.3 Case alignment

Another argument for the adjunct status of the V1 comes from the case frame in Type-B-RSVCs. In Type-B-RSVCs, the external argument is obligatorily marked by ergative case while the internal argument is marked by absolutive case. Notably, the presence of ERG-ABS case alignment is not determined by the transitivity of the initial predicate. As pointed out by Tollan (2018), external arguments of intransitive unergative verbs, such as *pese* 'sing', do not receive ergative case in the context of an (optional) internal argument. Instead, the arguments appear in an ABS-OBL case frame (see section 5.2.2).

(408) a. *Sā pese le tamāloa **i** le pese/fati.*
PST sing SPEC man.ABS OBL SPEC song/melody
'The man sang a song/melody.'

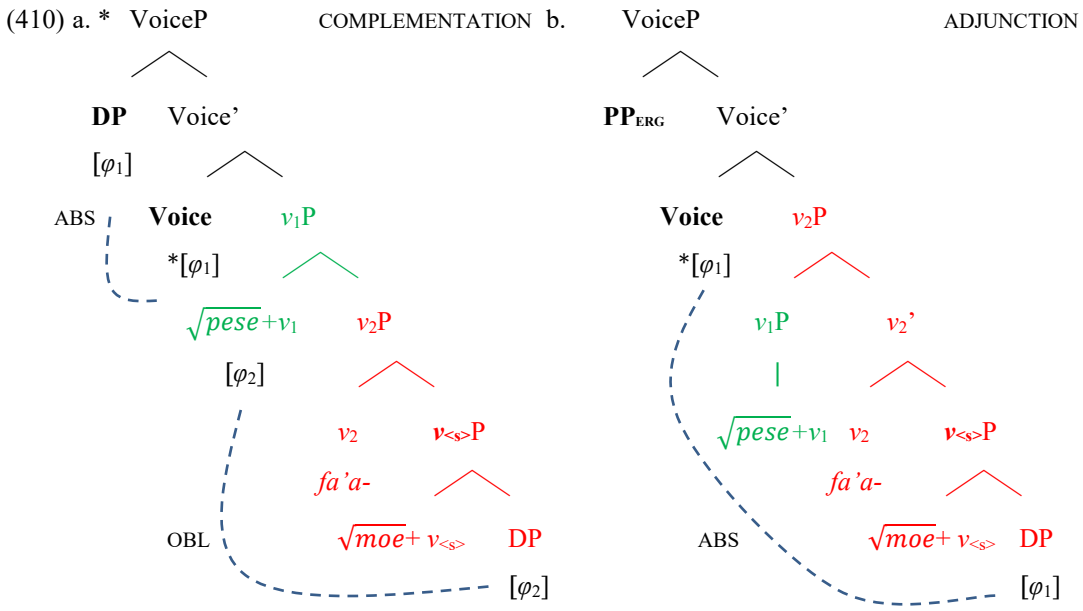
b. * *Sā pese **e** le tamāloa le pese/fati.*
PST sing ERG SPEC man SPEC song.ABS/melody.ABS
Intended: 'The man sang a song/melody.' (Tollan 2018: 8)

However, if *pese* 'sing' appears as the V1 in transitive Type-B-RSVCs, the external argument receives ergative case and the internal argument absolutive.

(409) a. % *Sā pese fa'a-moe~moe e le tama le pepe.*
PST sing CAUS-RED~sleep ERG SPEC boy SPEC baby.ABS
'The boy sang the baby to sleep.'

b. * *Sā pese fa'a-moe~moe le tama i le pepe.*
PST sing CAUS-RED~sleep SPEC boy.ABS ACC SPEC baby.ABS
'The boy sang the girl to sleep.'

In section 5.2.2.3, I suggested that unergative (and middle) roots obligatorily combine with a *v* head that licenses the internal argument and assigns it lexical oblique case. Consequently, the external argument can be licensed by the single licensing feature on Voice and can merge as an absolutive marked DP argument. With the assumption that lexical oblique case is determined by the encyclopedic entry of the unergative root, it is expected that this condition holds for Type-B-RSVCs. Therefore, if the unergative V1 is the matrix verb, the internal argument receives inherent oblique case from v_1, but if the causative V2 is the matrix verb, the internal argument receives absolutive case from Voice.



Since the Type-B-RSVCs with unergative V1s exhibit an ERG-ABS case alignment, this speaks in favor of an adjunction analysis of the manner verb, as the case assignment seems to be determined by the causative V2.

6.3.3 Summary

The results of the investigation of the morphosyntactic composition of Type-B-RSVCs indicate that the two lexical predicates combine via adjunction (see Table 10). In particular, the diagnostics suggest that the manner V1 is adjoined to the causative V2. Therefore, the causative verb can be identified as the matrix verb of the construction. In contrast, a complementation analysis cannot explain the pattern of adverbial modification by repetitive modifiers such as *toe*, the SVC-medial position of manner adverbs, Voice-driven causative morphology on the V2, and ergative case marking in the context of intransitive V1. Consequently, Samoan Type-B-RSVCs appear to belong to the class of serializing languages in which resultative meaning is realized by the means construction, such as Uyghur, Korean or Japanese (Sugar 2019, Ko & Sohn 2015, Tomioka 2006). However, this conclusion is only preliminary, as the type of semantic composition has not yet been defined, which is why I address this question in the next section.

	Complementation	Adjunction	Type-B-RSVCs
Narrow repetitive reading of *toe* 'again'	No	Yes	Yes
Causative morphology on V2	(No)	Yes	Yes
Ergative case on unergative subjects	No	Yes	Yes
SVC-medial position of manner adverbials	No	Yes	Yes

Table 10: Morphosyntactic properties of Samoan Type-B-RSVC.

6.4 Manner verbs as event modifiers

After the identification of adjunction as the type of morphosyntactic composition, this section focuses on the semantic composition of the manner and causative predicates in Samoan Type-B-RSVCs. Although the discussion of the morphosyntactic and semantic properties of Type-B-RSVCS tentatively suggest that this type of resultative construction shares its underlying syntactic and semantic properties with means constructions, this chapter provides additional semantic evidence that the manner V1 modifies the causing event introduced by the causative V2.

To investigate the semantic composition of Samoan Type-B-RSVCs, I briefly introduce the event semantic properties of four types of semantic composition, which have been discussed in the context of verb serialization involving two transitive predicates (cf. Zimmermann & Amaechi 2020, Owens 2011, Stewart 2001, Déchaine 1993). On the one hand, there is Event Modification, which is similar to the means construction. Here, both verbs predicate over the same (causing) event. On the other hand, there is Event Extension, where the two verbs are in an asymmetric (causative) relation. This type of composition has been identified in sequential SVCs in Igbo (see section 3.4; Zimmermann & Amaechi 2020). Moreover, I include Event Cumulation and (covert) ∃-Conjunction in this study, which predict a symmetric and independent relationship between the conjoined events. Yet, given the asymmetric (causative) relation between the manner V1 and causative V2, it is highly unlikely that Type-B-RSVCs are composed of these two compositional mechanisms.[92] By the application of the set of diagnostics that have been proposed

[92] Note that in general, Event Modification also describes a symmetrical relation between two eventualities. However, as discussed in the context of the means construction in section 3.2.1, the fact that the adjoined

by Zimmermann & Amaechi (2020), I demonstrate that the compositional type on the semantic level is Event Modification, i.e. both verbs predicate over the same (causing) event.

By combining the morphosyntactic and semantic properties of Samoan Type-B-RSVCs, I argue that this type of resultative constructions belong to the means constructions, in that the adjoined manner V1 modifies the causing event that is entailed by the causative V2. In particular, I propose that the manner predicate merges as a *v*P-sized modifier to the causing-event introducing *v* head of the *fa'a*-causative. As Samoan Type-B-RSVCs differ from other instances of means constructions, such as English *by*-phrases, with respect to combinatorial restrictions and obligatory internal argument sharing, I show that these language specific properties follow from the morphosyntactic configuration of the two predicates.

6.4.1 On the semantic properties of event composition

To investigate the semantic composition of SVCs, Zimmermann & Amaechi (2020) propose a set of event semantic diagnostics that are sensitive to specific semantic properties of the respective compositional types. These properties are (i) the number of independent events, (ii) the number of independent forces, (iii) the number of independent agents and (iv) the presence of individual existential closure. In the following, I will briefly discuss the characteristics illustrated by the example in (411).

(411) a. *Sā lamu fa'a-malū e Malia le mea ai.*
PST chew CAUS-soft ERG Mary SPEC food.ABS
'Mary broke the cup by throwing it.'

b. $[\![v_1P]\!]$ = λe. chew(e) ∧ Pat(food, e)

c. $[\![v_2P]\!]$ = λe.∃s. Caus(e, s) ∧ soft(s) ∧ Holder(food, s)

Firstly, in Event Modification, the two verbs predicate over a single event. As there is only a single event, the construction shares a single agent argument and a single event force. This type of composition is observed from the means construction, in which the manner adjunct modifies the causing event entailed by the causative matrix (see section 3.2.1). Depending on the size of the adjunct, i.e. whether it introduces an agent theta role,

predicate modifies an event already entailed in the causative predicate gives rise to an asymmetric relation (Sæbø 2016, 2008).

this construction is derived by Predicate Modification, Event Identification or Functional Application (Sæbø 2016, Solstad 2009, Kratzer 1996).

(412) $[\![\text{RSVC}]\!] = \lambda e.\exists s.\ Ag(Mary, e) \wedge chew(e) \wedge Pat(food, e) \wedge Caus(e, s)\ soft(s) \wedge Holder(food, s)$

Secondly, in Event Extension, the verbal predicates introduce two (action) events e_1 and e_2 that are in a non-Boolean part-whole relationship (Zimmermann & Amaechi 2020, also von Fintel 1994). Thus, both events are individual parts of an (underspecified-specified) marco-event e_3, which determines the overall force of the complex event (cf. Goldschmidt 2018, Copley & Harley 2015). This relation of the two events is illustrated by Figure 20.

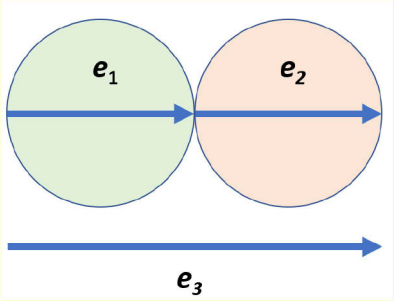


Figure 20: Event composition and force direction in Event Extension (Zimmermann & Amaechi 2020).

In section 3.4, event extension has been discussed in the context of consequential SVCs in Igbo, in which two (action) events are in an asymmetric (cause-like) relation, in that the realization of the e_2 depends on the happening of e_1 in the absence of an intermediate agent (Zimmermann & Amaechi 2020, cf. Bohnemeyer & van Valin 2017 on the macro-event property). Therefore, a single agent role is tied to the initial event (413).

(413) $[\![\text{RSVC}]\!] = \lambda e_3\lambda e_2\lambda e_1.\exists s.\ Ag(Mary, e_1) \wedge chew(e_1) \wedge Pat\ (food, e_1)\ e_1 \leq e_3 \wedge$
$e_2 \leq e_3 \wedge Caus(e_2, s) \wedge soft(s) \wedge Holder(food, s)$

Thirdly, in Event Cumulation, the two events, introduced by the verbal predicates, form a plural event (Zimmermann & Amaechi 2020, Schmitt 2013, Keine 2013, Kratzer 2007, Stewart 2001). Therefore, e_1 and e_2 are atomic subparts of a plural macro-event that can come with independent event forces. This means that the sub-events are in a Boolean structure and are not in an asymmetric (causative-like) relationship, in contrast to Event Extension. As Event Cumulation takes place below existential closure, a single agent role is tied to the plural event variable (see Keine 2013 for a discussion).

(414) $[\![\text{RSVC}]\!] = \lambda e.\lambda e1\lambda e2\exists s.\ e=e_1 \oplus e_2 \wedge Ag(Mary, e) \wedge chew(e_1) \wedge Pat(food, s) \wedge$
$Caus(e_2, s) \wedge soft\ (s) \wedge Holder(food, s)$

Lastly, in ∃-Conjunction, two existentially bound events are conjoined at the propositional level, with each event contributing its own (independent) agent argument. Consequentially, the relation between the two events is only indirect, in that neither e_1 or e_2 asymmetrically depend on each other. This also implies that the two conjoined predicates come with independent force values.

(415) $[\![\text{RSVC}]\!] = \exists e1.\ \text{Ag}(\text{Mary}, e_1) \wedge \text{chew}(e_1) \wedge \text{Pat}(\text{food}, e_1)$
$\& \exists e_2.\exists s.\ \text{Ag}(\text{Mary}, e_2) \wedge \text{Caus}(e_2, s) \wedge \text{soft}(s) \wedge \text{Pat}(\text{food}, s)$

Based on the properties summarized in Table 11, I determine the semantic type composition of the manner and causative predicates in Samoan Type-B-RSVCs.

	Event Modification	**Event Extension**	**Event Cumulation**	**∃-Conjunction**
# of agents	1	1	1	2
# of f-direction	1	1	2	2
# of events	1	2	2	2
∃-closure	No	No	No	Yes

Table 11: Semantic properties of compositional types in the context of verb serialization.

6.4.2 Event semantic diagnostics

Zimmermann & Amaechi (2020) demonstrate that the different compositional types can be distinguished by the following event semantic diagnostics, which are sensitive to the composition-specific properties identified in Table 11. This includes (i) contradictory adverbs, (ii) adverbial quantification at the aspectual level, (iii) agent cumulativity, and (iv) agent constancy, i.e. the infelicity of agent reduction over sub-events. In the following, I briefly discuss the diagnostics in the context of resultatives, before applying them to Samoan Type-B-RSVCs.

6.4.2.1 Contradictory adverbs

A first diagnostic comes from contradictory adverbs that modify an event in the opposite direction on the same scale, e.g. the manner adverbs *quickly* and *slowly* (Zimmermann & Amaechi 2020, Goldschmidt 2018, Williams 2015, Martin & Schäfer 2014, Levin & Rappaport Hovav 2001, Higginbotham 2000, Eckardt 1998, Davidson 1969 *inter alia*). This diagnostic has already been extensively discussed for the decomposition of the event

structure of lexical causatives (section 2.2.4), periphrastic causatives (section 2.4), resultative secondary predication (section 3.1.1), the means constructions (section 3.2.1) and Event Extension (section 3.4). The relevant observation for the investigation in this section is that only events that do not share their force value can be modified by contradictory adverbs. Therefore, contradictory adverbs are predicted to be felicitous in Event Cumulation and ∃-Conjunction, but not in Event Modification and Event Extension, as illustrated below by the English means construction (416)a as well as consequential SVCs (416)b and covert coordination in Igbo (416)c.

(416) a. **EVENT MODIFICATION:**
*#Buffing them **rapidly**, Peter **slowly** shined his shoes.*

b. **EVENT EXTENSION:**
*# Úchè gbù-rù òkúkò **ósííso** sí-e **nwáyòò~nwáyòò.*** IGBO
Uche kill-PST chicken quickly cook-SFX RED~slowly
Intended: 'Uche killed the chicken quickly and killed it slowly.'

c. **∃-CONJUNCTION:**
*Úchè gbù-rù òkúkò **ósííso** sí-e ya **nwáyòò~nwáyòò.*** IGBO
Uche kill-PST chicken quickly cook-SFX 3.SG RED~slowly
'Uche killed the chicken quickly and killed it slowly.' (Zimmermann & Amaechi 2020)

In section 6.3.1.2, I have shown that Samoan Type-B-RSVCs exhibit two positions for adverbial particles. On the one hand, there is an SVC-medial position, in which the adverbial attaches to the manner adjunct. On the other hand, there is an SVC-final position, in which the adverbial attaches to the matrix predicate. However, both positions cannot be filled by contradictory adverbs such as *vave* 'quick' and *lemū* 'slow'. This is shown in (417)a, where the 'quick wiping' is in contradiction with the 'slow cleaning'.

(417) a. *# Sā solo **lemū** fa'a-mamā **vave** e Malia le laulau.*
PST wipe slowly CAUS-clean quickly ERG Mary SPEC table.ABS
Intended: 'Mary cleaned the table quickly by slowly wiping it.'

b. *# Sā solo **vave** fa'a-mamā **lemū** e Malia le laulau.*
PST wipe quickly CAUS-clean slowly ERG Mary SPEC table.ABS
Intended: 'Mary cleaned the table slowly by quickly wiping it.'

Consequently, Samoan Type-B-RSVCs show the predicted result for Event Modification or Event Extension with respect to contradictory adverbs. This supports the assumption

that the two predicates in Type-B-RSVCs are not composed via (covert) coordination.[93] In sum, adverbial modification with contradictory adverbs is not possible in Samoan causatives, which strongly suggests that the manner V1 and the causative V2 share the same force-direction, and potentially predicate over the same event.

6.4.2.2 Adverbial quantification

Adverbial quantification and aspectual marking saturate event argument positions, and are responsible for the existential closure of events (von Fintel 2004, Kratzer 1998, Klein 1994, see Zimmermann & Amaechi 2020, Stewart 2001 for an application of this diagnostic in the context of verb serialization). Therefore, it is expected that separate adverbial quantification is only compatible with quantified events that are conjoined at the propositional level above VoiceP (e.g TP-coordination in English; also Angsongna 2019 on multi-aspectual constructions in Dàgáárè, Stewart 2001 on covert coordination in Édò). This is demonstrated for Igbo, where the adverbial quantifiers *habitually* and *sometimes* can co-occur in the context of consequential SVCs (Event Extension) (418)a, but not in the context of covert coordination (∃-Conjunction) (418)b (Zimmermann & Amaechi 2020).

(418) a. **EVENT EXTENSION:**

 # Úchè ***ná-****ègbú ò.kú.kò* ***ógè*** ***ù.fó.dú*** *síé.* IGBO

Uche HAB-kill chicken time some cook

Intended: 'Uche regularly kills chicken, sometimes cooking them.'

b. **∃-CONJUNCTION:**

Úchè ***ná-****ègbú ò.kú.kò* ***ógè*** ***ù.fó.dú*** *síé ya.* IGBO

Uche HAB-kill chicken time some cook 3SG

'Uche regularly kills chicken, sometimes cooking them.'

(Zimmermann & Amaechi 2020)

In Samoan Type-B-RSVCs, it is not possible to independently mark the individual verbs for different aspectual properties. This is illustrated by the infelicity of two contradictory aspectual adverbials *so'o* 'often' and *i nisi aso* 'sometimes' in the same clause.

[93] Note that this generalization is expected to hold only for *fa'a*-causatives that embed stative verbs such as *mamā* 'clean'. If *fa'a*-causatives embed anticausative verbs like *pa'ū* 'fall', adverbial modification of the change subevent is expected to be possible (see Pylkkänen 2008 for examples). To avoid this amount of complexity in this study, I have focused solely on *fa'a*-causatives that embed stative PC-verbs.

(419) # *E* *solo~solo* *fa'a-mamā* ***so'o*** *e* *Pita* *le* *laulau* ***i nisi aso.***
GENR RED~wipe CAUS-clean often ERG Peter SPEC table.ABS sometimes
Intended: 'Peter often wipes the table, but only sometimes he cleans it.'

Instead, the participants rephrase the expression in (419) as a bi-clausal construction, in which the adverbial modifiers occur in separate clauses, conjoined by *'o'a* 'but'.

(420) *E* *solo~solo* ***so'o*** *e* *Pita* *le* *la'au*
GENR RED~wipe often ERG Peter SPEC table.ABS

'o'a ***nisi*** ***aso*** *e* *solo~solo* *fa'a-mamā* *ai.*
but sometimes ERG RED~wipe CAUS-clean ANAPH
'Peter often wipes the table in order to clean it, but only sometimes he wipes it clean.'

In addition, the individual verbs cannot be marked by separate tense/aspect markers without a change in the semantic interpretation. As discussed in section 6.1, the presence of the generic tense/aspect marker *e* before the causative V2 shifts the meaning to a purpose clause-like interpretation.

(421) ***Sā*** *solo~solo* ***e*** *fa'a-mamā* *e* *Pita* *le* *laulau.*
PST RED~wipe GENR CAUS-clean ERG Peter SPEC table.ABS
'Peter often wiped the table, but only sometimes he cleans it.'

Therefore, separate aspectual modification and adverbial quantification is not available in Type-B-RSVCs, which suggests that the two predicates are not conjoined on a propositional (AspP-) level.

6.4.2.3 Agent cumulativity

In contrast to ∃-Conjunction, Event Modification and Event Extension, Event Cumulativity allows agent cumulation over atomic subevents, (Zimmermann & Amaechi 2020, Keine 2013, Kratzer 2007, Zhang 2007, Krifka 1998, 1992). This is shown for English VP-coordination below. Under the so-called *respective* interpretation (422)a, the coordinated subject entities are mapped to their respective sub-events – i.e. only John sang and only Bill danced. Likewise, one interpretation of the plural subject in (422)b can be that one group of students sang while another group of students danced (e.g. Kubota & Levine 2016, Schmitt 2013, Chaves 2012, McCawley 1998, Kay 1989).

(422) a. *John and Bill sang and danced (respectively).*
b. *Several students sang and danced (respectively).*

If Samoan Type-B-RSVCs form a plural event, plural agents are predicted to be distributable over the events denoted by the respective predicates. However, this prediction is not borne out by the data. For example, the context in (423)a demands an agent-cumulative construal, in which Peter did the sawing and Mary did the felling. Therefore, the plural subject, Mary and Peter, cannot act together as a collective agent in charge of both felling and sawing. In such contexts, Type-B-RSVCs are infelicitous.

(423) a. Peter and Mary have a small garden. To make space for a swimming pool, they had to cut down a tree. Therefore, Peter took his old saw and tried to fell the tree with it. Unfortunately, his old saw was too dull, and it didn't work well. As Mary saw that Peter was not able to fell the tree, she took an axe from the garage and chapped the tree down by herself.

 # Sā 'ili fa'a-pa'ū e Malia ma Pita le la'au.
PST saw CAUS-fall ERG Mary and Peter SPEC tree.ABS
Intended: 'Mary and Peter sawed the tree down.'

b. Peter and Mary have a little daughter. One morning, the daughter had to go to school very early. But the time she had to get up, she was still sleeping. To wake her up, Peter started to sing her favorite song – but she didn't wake up. Therefore, Mary sat down to her bed and caressed the girl awake.

 # Sā mili~mili fa'a-ala e Malia ma Pita le teine.
PST RED~rub CAUS-awake ERG Mary and Peter SPEC tree.ABS
Intended: 'Mary and Peter caressed the girl awake.'

Consequently, the subevents of Samoan Type-B-RSVCs are not composed via Event Cumulation and do not form a plural event.

6.4.2.4 Agent constancy

A final diagnostic comes from the observation that the set of plural agents must be constant in Event Modification, but not in Event Extension, Event Cumulation or ∃-Conjunction (Zimmermann & Amaechi 2020). This diagnostic is related to the single event in the structure of Event Modification, which disallows a distribution of agent over subevents, as there is only a single event in the structure. Although Event Extension has been shown to be infelicitous in contexts of agent cumulativity, it allows agent reduction in the direction of force, i.e. the event denoted by V2 can be performed by a subset of the agents related to event V1. This is illustrated by Igbo consequential SVCs in (424), where only half of the men who are involved in catching fish are cooking the fish.

(424) *Úmùnwóke ìrí kò-tà-rà ázù síé.* IGBO
men ten catch-DIR-PST fish cook
'Ten men caught the fish and cooked it.' (Zimmermann & Amaechi 2020)
→ True if ten men caught the fish and only five of them cooked it.

In Samoan Type-B-RSVCs, agent constancy is a necessary condition. This is illustrated by the example in (425). Here, the context forces an interpretation, in which a subset of the plural agent *tamali'i e lima* 'five men' not only participates in a cutting event, but also in a felling event. In such contexts, Type-B-RSVCs are only marginally acceptable.

(425) Five men were going into the woods to cut down some trees. Each one carried an axe, but three axes were very dull. As the wood was too strong, the dull axes were not able to cut the trees. Therefore, only three men were cutting the trees down successfully.

?? *Sā ta fa'a-pa<u>'ū* [*e tamaili'i e lima*] *la'au.*
PST cut CAUS-<RED>fall ERG man.PL GENR five tree.ABS
'The five men fell the trees by cutting them.'

Instead, one speaker suggested that the sentence may have a comitative interpretation, in which all five men took part in an abstract *wood-cutting* event, without being involved in every sub-event. In this interpretation, it would be sufficient for some men, who just comment on the *cutting* and *felling* of the other men, to be involved in such an abstract event. However, as this interpretation is different from agent reduction, Samoan Type-B-RSVCs can be analyzed to be subject to agent constancy, which is expected if the two predicates are composed via Event Modification.

6.4.3 Type-B-RSVCs as a means construction

The results of the event semantics demonstrate that the compositional type of Samoan Type-B-RSVCs is Event Modification. Therefore, the syntactically adjoined manner V1 predicates over the underspecified causing event entailed the causative V2 and does not introduce a separate event variable to the composition of the complex resultative event.

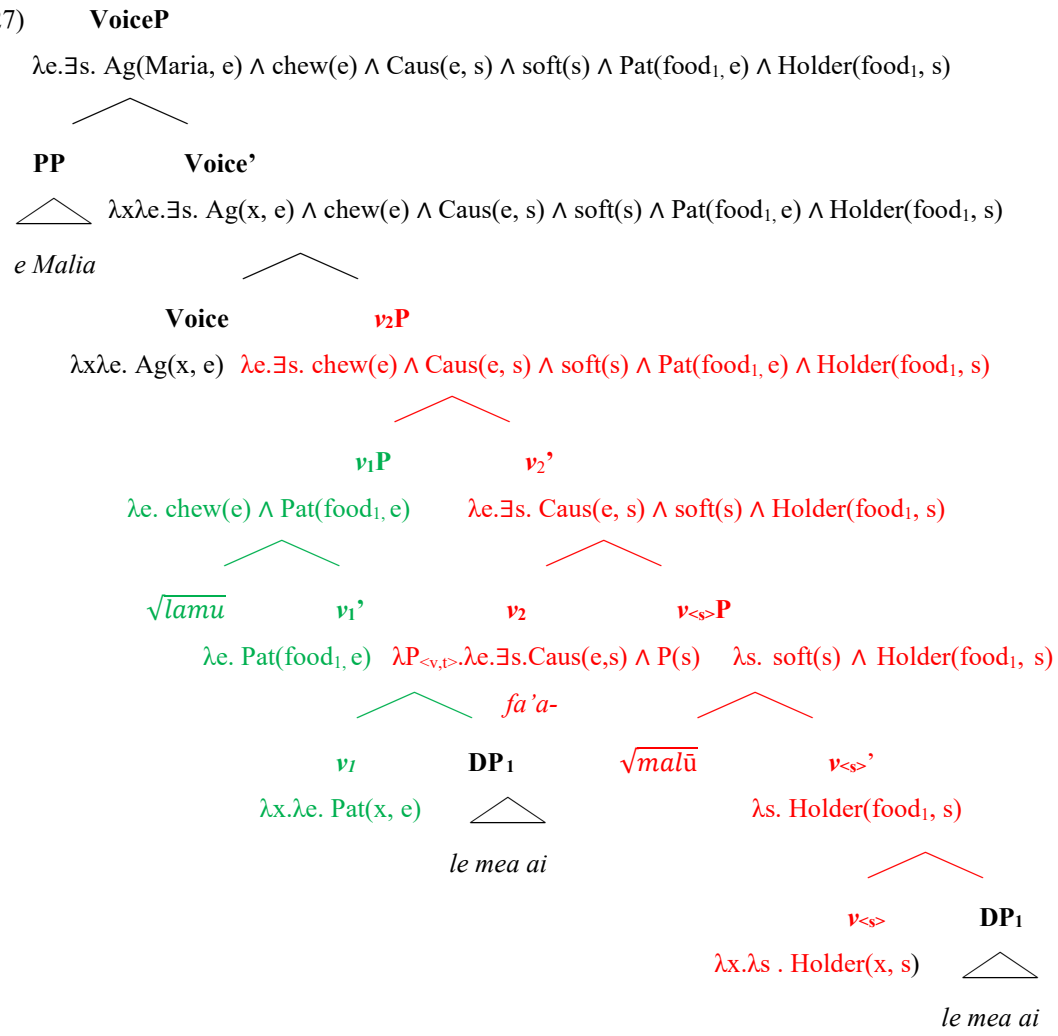
	Event Modification	**Event Extension**	**Event Cumulation**	**∃-Conjunction**	**Type-B-RSVCs**
A-quantification	No	No	No	Yes	No
Contradictory adverbs	No	No	Yes	Yes	No
Agent cumulativity	No	No	Yes	No	No
Agent constancy	Yes	No	No	(Yes)	Yes

Table 12: The semantic type of composition in Samoan Type-B-RSVCs.

Combining the evidence from the analysis of the argument and event structure, Samoan Type-B-RSVCs are instances of the means-construction, in which the manner V1 merges as a means adjunct to the causative V2. As such, it modifies the causing event entailed by the causative predicates. The full derivation of Type-B-RSVCs is presented in (427) for the sentence in (426). In particular, I propose that the manner V1 is merged as a *v*P-sized modifier in the modifying position (sister of *v*') of the causative *v*P, i.e. in the position that has been identified to host event modification (see section 3; Folli & Harley 2019, Alexiadou et al. 2015, Sæbø 2016, Solstad 2006).[94]

(426) *Sā lamu fa'a-malū e Malia le mea ai.*
PST chew CAUS-soft ERG Mary SPEC food
'Mary chew the food soft.'

(427)



[94] Note that the tree in (427) shows the configuration of the VoiceP of Type-B-RSVCs at a pre-movement stage. As shown in section 5.2.3, Samoan VSO order is derived via phrasal movement of the VoiceP to a clause initial position, stranding non-verbal (phasal) constituents in clause final position (van Urk 2019a). As both predicates move within the VoiceP, the verbal configuration is preserved under movement, while the external and internal arguments are spelled-out in their lower copy.

In the following, I demonstrate how this structure accounts for the event and argument structure of Type-B-RSVCs, with regard to distribution of verb classes and the constraint of internal argument matching under the language specific morphosyntactic and semantic properties of the individual predicates that enter Type-B-RSVCS (see section 6.2).

Firstly, the ungrammaticality of stative unaccusative and middle predicates, as well as anticausative predicates, follows from the semantic composition of the two events. As *fa'a*-causatives obligatorily denote a voltional action event that is performed by an agent, only predicates that can describe such events can appear as event modifiers of the causative predicate, i.e. (causative) manner verbs. Therefore, adjunct position is restricted to (causative) manner verb, and potentially causative verbs only. Similar restriction have been described cross-linguistically for other instances of the means construction, in both serializing and non-serializing languages (Sugar 2019 on Uyghur RSVCs, Ko & Sohn 2015 on Korean RSVCs, Truswell 2007b on English by-phrases).

Secondly, as I have not come across any example that involves Voice-related morphology on the manner V1, such as *fa'a*- or the passive morpheme *-(C)ia*, I assume that the manner V1 merges as a *v*P and not as a full VoiceP. Consequently, the external argument of Type-B-RSVCs is merged in a single Voice projection on top of the resultative *v*P. This is in line with the matching condition on verb serialization, which has been observed in several unrelated languages. This hypothesis states that serialization only takes place if both the adjunction and the matrix verb are merged at the same syntactic level, which exhibits the same syntactic features (i.e. T, Asp, Voice, v; Ko & Sohn 2015, Kalin & Keenan 2011, Baker & Stewart 2002, also Angsongna 2019).

(428) **MATCHING CONDITION ON VERB SERIALIZATION:** (Baker & Stewart 2002: 57)
XP can be an adjunction of YP only if XP and YP are comparable syntactic categories.

However, more substantial evidence for the absence of Voice comes from the status of the internal argument in Samoan Type-B-RSVCs. As shown in section 6.2.2, the (causative) manner in the V1 position obligatorily combines with an internal argument, as Samoan disallows the internal argument position from being saturated by existential binding (cf. section 5.4.1.3). Additional support for this assumption comes from plural marking on the manner verb. As plural marking has been shown to be subject to a locality condition, the internal argument must (also) be syntactically projected within the manner adjunct (cf. section 6.3.1.1).

While the presence of an internal argument is not uncommon for the means construction, it is unexpected that the internal argument of V1 must necessarily match the

internal argument of the V1. As shown in English, for example, the internal argument of the means adjunct can be a separate argument that is used as an instrument in the causing event (e.g. Sæbø 2008, Truswell 2007b).

(429) a. *Peter opened the door by pressing **a button**.*
b. *Maria cut herself carving **the pumpkin**.*

This also holds true for RSVCs in Japanese, where the internal argument is not syntactically projected, but existentially bound. Although the internal argument of the manner V1 cannot be overtly expressed, its interpretation can differ from the internal argument of the causative verb, i.e. in (430) the object of the wiping event is the (unexpressed) face and not the dust itself (Tomioka 2006; see also section 8.2.2on Daakaka).

(430) *Kotaro-ga hokori-o huki-tot-ta.* JAPANESE
Kotaro-NOM dust-ACC wipe-remove-PST
'Kotaro removed the dust by wiping (his face)' (Tomioka 2006: 137)

In contrast, in Samoan Type-B-RSVCs, the implicit internal argument of the adjoined V1 must be interpreted as the overtly expressed internal argument of the causative V2.

(431) * *Sā lamu (pulu) fa'a-pa~pa'e e le teine (pulu) nifo.*
PST chew gum(.ABS) CAUS-RED~bleach ERG SPEC girl gum.(ABS) teeth.ABS
Intended: 'The girl cleaned her teeth by chewing gum.'

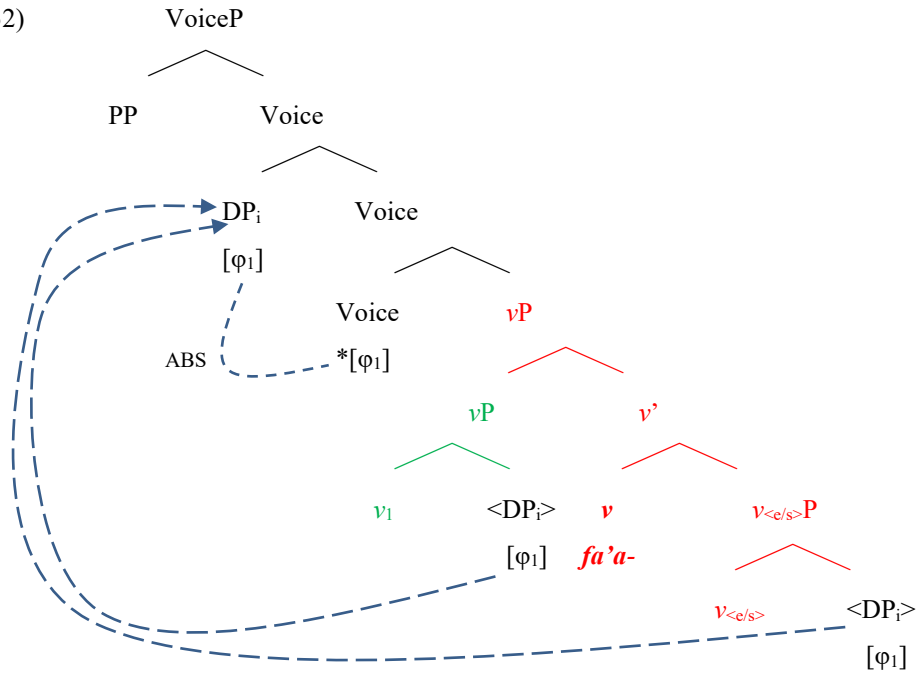
To account for the obligatory internal argument matching in Type-B-RSVCs, I propose that this restriction arises from the licensing of the internal argument of the adjunct, which, I suggest involve ATB-movement to Spec, VoiceP out of both *v*Ps.

As outlined in section 5.2.2, Samoan, as a syntactic ergative language, is subject to certain constraints on nominal licensing, in that only the highest Voice head under T exhibits licensing features. This differs from languages such as English, in which Voice introduces its own licensing features, allowing the licensing of the internal argument in transitive contexts. In the contexts of the English means construction, as in example (429), the internal argument of the means-adjunct is licensed by the Voice head, present in the structure of the verbal gerund (cf. Alexiadou 2013). In Samoan Type-B-RSVCs, the internal argument of transitive verbs cannot be licensed within the manner adjunct, as no licenser is present.[95] Therefore, the internal argument of the adjoined predicate must be licensed by the Voice head in the matrix clause. As this Voice head is the only nominal

[95] Note that this observation holds even under the assumption that the manner verb is merged as a VoiceP.

licenser in the structure, the internal argument of both the manner V1 and causative V2 must be licensed by the same functional head. Therefore, I suggest that the specific configuration of verbal predicates in Type-B-RSVCs enables both representations to undergo Across-The-Board (ATB) movement triggered by the strong licensing feature to the Spec, VoiceP position (see Lidz & Williams 2002 on object sharing in Kannada resultatives, cf. Hiraiwa & Bodomo 2008 on object sharing Daagara SVCs).

(432)



The observation to make here is that although Type-B-RSVCs differ semantically from types of coordination, the configuration of the respective verbal predicates, i.e. the embedded stative or anticausative v_3P and the adjoined causative v_1P, resembles the configuration assumed for coordination structures (Lidz & Williams 2002, cf. Keine 2013, Johannessen 1998, Kayne 1994 on the SPEC-COMP configuration of coordination).

(433) a. COORDINATION b. TYPE-B-RSVCS

The movement out of coordinated structures is subject to the Coordinate Structure Constraint, which states that no element that is contained by a conjunct can be extracted.

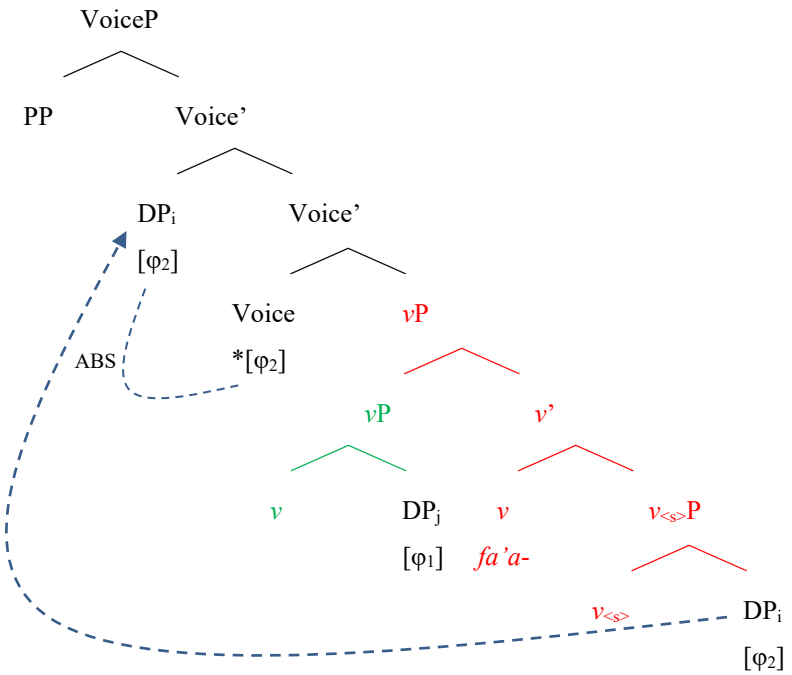
(434) **COORDINATE STRUCTURE CONSTRAINT:** (Ross 1967: 87)
In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

The only exception to this constraint is ATB-movement, in which two constituents can be extracted out of both conjuncts simultaneously. The important observation is that this is only possible if the constituents in both conjuncts satisfy identity constraints (Munn 1993, Williams 1978, Ross 1967).

(435) **ACROSS-THE-BOARD (ATB) MOVEMENT:** (de Vos 2005: 4)
In a coordinate structure, the same constituent may be extracted from within all conjuncts simultaneously

By the assumption that Samoan Type-B-RSVCs qualify as an ATB-configuration, the identity constraint on internal arguments in this construction follows from the type of movement the argument needs to undergo to be licensed by the nominal licensing feature on Voice. If the syntactically projected internal argument of the manner adjunct were different from the internal argument of the causative matrix verb, ATB-movement would be blocked and neither of the two internal arguments would be licensed, as shown in (436).

(436) *



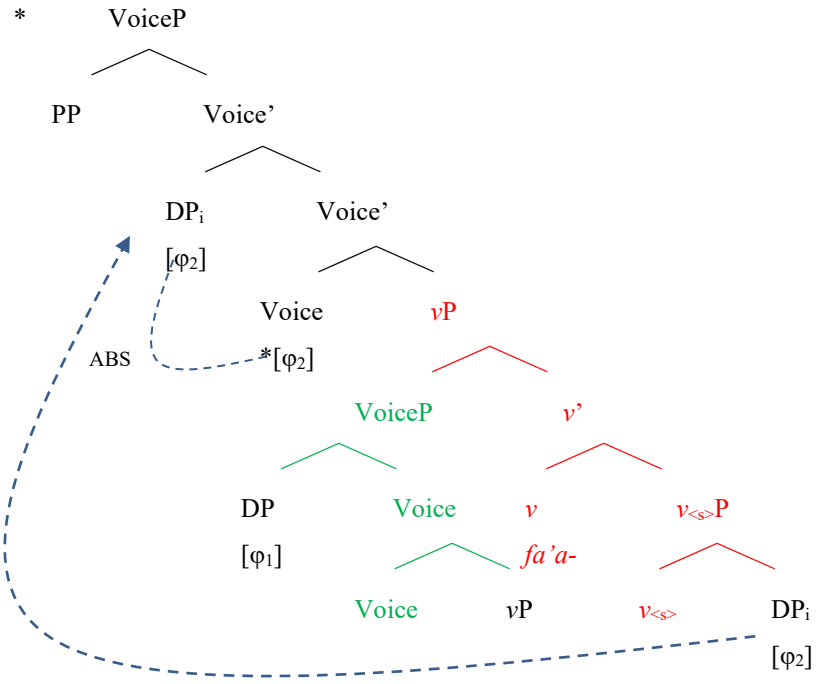
Notably, this proposal can also account for further morphosyntactic properties of Type-B-RSVCs. On the one hand, it has been shown that unergative V1s are generally dispreferred by most speakers – though some speakers judge them to be fully grammatical. The variation observed in this context could arise from the violation of symmetry of ATB

movement, as only a constituent is moved. Here, we compare the ungrammaticality of ATB-movement in the context of unergative and transitive verbs in English.[96]

(437) * *Who did Sir Aguecheck talk and bore to tears?* (de Vos 2005: 21)

On the other hand, it supports the assumption that the manner V1 does not introduce its own external argument. As the adjoined Voice head would not have any licensing features, external argument PRO would need to be licensed by the matrix Voice head. This, however, would violate the identity constraint on ATB-movement, leaving both the external and internal argument of the adjunct unlicensed.

(438) *



Therefore, the matching condition on internal arguments in Type-B-RSVCs in Samoan arises from various language specific properties, such as the limited licensing features of Voice, the absence of object deletion, and the availability of ATB configuration in the context of *v*P-selecting *fa'a*-causatives.

6.5 Summary

To summarize, the analysis of the morphosyntactic and semantic properties of Type-B-RSVCs shows that the Samoan Type-B-RSVC a resultative construction that belongs to

[96] Secondly, the observation that *fa'a*-causatives, but not lexical causatives, are allowed as the causative V2, as *tatala* 'open' may be attributed to the different syntactic structures. While fa'a-causatives embed a vP, lexical causatives can be assumed to embed a ResP. As the ResP is an a-categorial projection, the configuration may not allow for ATB-movement as it is not fully symmetrical.

the class of the means, as the causative verb functions as the matrix verb of the class, with the manner verb functioning as means adjunction to the causative matrix verb. Therefore, Samoan Type-B-RSVCs are related to RSVCs in Uyghur, Korean and Japanese, which share the same underlying event structure (Sugar 2019, Ko & Sohn 2015, Tomioka 2006). In contrast, Samoan Type-B-RSVCs differ from RSVCs, which are cases of resultative secondary predication, such as Mandarin, Lao or Édò (Liu 2019, Cole 2016, Baker & Stewart 2002), according to the configuration of the manner and result denoting predicate.

Moreover, the study of Samoan Type-B-RSVCs has shown that cross-linguistic variation in the resultative domain can be explained by more general morphosyntactic and semantic constraints on argument and event structure building in Samoan. For example, the observed internal argument matching in Type-B-RSVCs arise primarily from the combination of the absence of object deletion and the limited nominal licensing features in a syntactic ergative language, such as Samoan. In the next part, I turn to Daakaka Type-A-RSVCs to investigate the variation in the resultative domain in Oceanic languages, with respect to the morphological marking of causativity on the causative V2 (cf. chapter 4).

Part III: Case study on Daakaka

Chapter 7: Serializing causatives in Daakaka

In this part, I focus on Type-A-RSVCs in Daakaka. In contrast to Type-B-RSVCs, the causative V2 in Type-A-RSVCs is not marked by a causative affix, but is instead realized by a lexical causative verb. Moreover, manner V1 obligatorily appears in its intransitive form (von Prince 2015). This is shown in (439).

(439) a. *Bong ma **ta** **mwelili-ane** lee ente.*
Bong REAL cut.ITR be.small-TR tree DEM
Lit: 'Bong made the tree (into) small pieces by cutting it.'

b. *Angela ma **tas** **tiwiye** etastas ente.*
Angela REAL sit.ITR break.TR bench DEM
'Angele broke the bench by sitting (on it).'

c. *Adam mwe **kyes** **wesa** tisot ente.*
Adam REAL cut.ITR clean.TR t-shirt DEM
'Adam cleaned the t-shirt by washing it.'

To investigate the morphosyntactic and semantic properties of Type-A-RSVCS in Daakaka, I first focus on the event and argument structure of Daakaka verbal predicates outside of the resultative constructions. Unlike Samoan, Daakaka does not exhibit a productive way to derive morphological causatives from stative or anticausative PC verbs. Instead, Daakaka exhibits a comparatively small class of causative result verbs. Also belonging to this class of causative result verbs is a set of verbs, which exhibit a manner/result ambiguity, in that they can be used as manner or result verbs. As discussed for English *cut*-type verbs in section 2.2.3, the manner component drops out in the causative use (cf. Levin & Rappaport Hovav 2013). Quite unexpectedly, causative result verbs are subject to a serializing condition, in that they obligatorily combine with a manner verb (cf. resultative compounds in Oceanic in section 4.2.4).

After a brief grammatical overview (section 7.1 and 7.2), I provide an analysis of transitivity marking in Daakaka, which builds on the account of nominal licensing as developed in section 1.1.3 (Nie 2020). In particular, I argue that transitive morphology is the spell-out of a secondary licensing head on Voice in transitive configurations (section 7.3). I then focus on the distribution of manner and result components in Daakaka simple verbs, revealing a heavily suppletive system, in which causative predicates solely occur in Type-A-RSVCs (section7.4).

7.1 Typological overview

Daakaka is an Oceanic language spoken by a community of approximately 1,000 speakers on the island of Ambrym of Vanuatu. Despite its small number of speakers, Daakaka is comparably stable, as the language is frequently used in daily communication and children still learn the language from their parents as a first language. However, facing rapidly changing social and (socio-)economical circumstances, Daakaka is threatened by the increasing use of Vanuatu's lingua franca Bislama, and to a lesser degree, English (von Prince 2015). As commonly observed for languages in a region which is characterized by the highest language density in the world (François et al. 2015), Daakaka speakers are multilingual, often speaking other neighboring languages in addition to Bislama, along with some knowledge in English or French. On the triangle-shaped island of Ambrym, there are five major vernaculars spoken in different parts of the island. There is North Ambrym, the West-Ambrym languages Dalkalaen, Daakaka and Daakie, as well as Vatlongos (Southeast Ambrym).

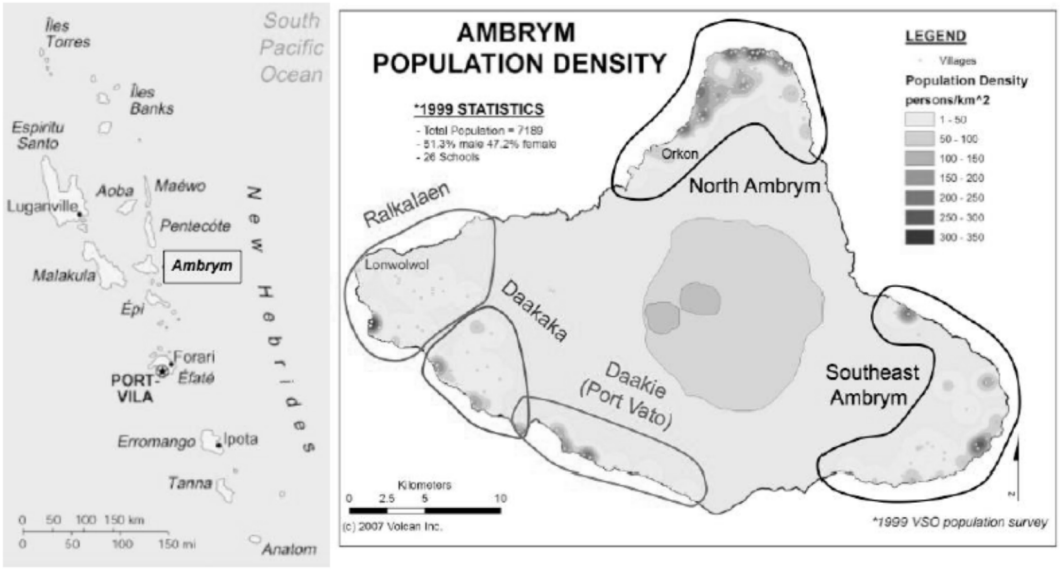


Figure 21: Map of Vanuatu (left) and the distribution of languages on the island of Ambrym (Krifka 2011).

While these vernaculars are widely considered to be different languages, they are closely related, forming a dialect chain from North Ambrym across the West-Ambrym languages Dalkalaen, Daakaka and Daakie, to Vatlongos. As indicated in Table 13, North Ambrym and the West-Ambrym languages share many cognates, whereas Southeast-Ambrym is more closely related to Paamese on the neighboring island Paama. This is also reflected by personal and cultural relationships across the island, which appear to be closer between

the North and the West than between the Southeast and the rest of the island (Ridge 2019, von Prince 2015, Franjieh 2012).

North Ambrym		Lonwolwol	Daakaka		Daakie	South East Ambrym	
Ranon							
93.2/221	**Fonah**						
71.8/216	72.5/240	**Fali**					
63.3/215	65.4/240	74.9/231	**Baiap**				
62.7/212	62.4/237	71.9/231	81.9/232	**Sesivi**			
60.3/214	62.0/234	67.5/228	76.6/231	77.3/225	**Port Vato**		
50.7/217	49.6/249	47.8/232	532/233	48.7/228	51.5/227	**Toak**	
51.4/218	50.0/244	49.1/234	53.4/238	48.7/232	50.9/232	88.1/236	**Maat**

Table 13: Dialectal comparison of Ambrym languages (Franjieh 2012: 22).

Within the Oceanic language family, Daakaka is part of the Central Vanuatu Linkage of Southern Oceanic Linkage. In the genealogical literature, there is some debate about the internal classification of Vanuatu languages, and whether Central Vanuatu should be grouped with Northern or Southern Vanuatu languages, with good arguments made on both sides (cf. François et al. 2015, Clark 2009, Lynch et al. 2002).

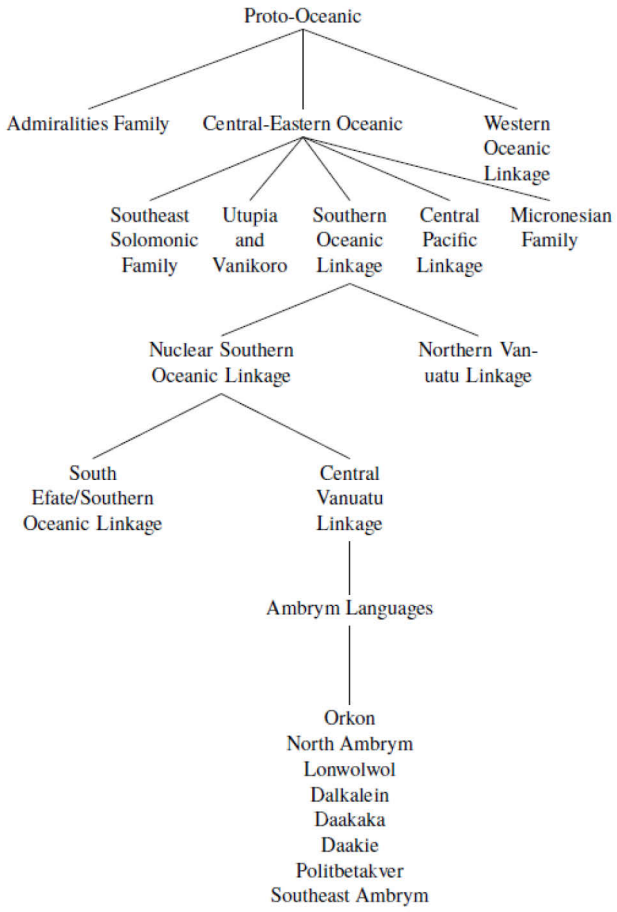


Figure 22: Subgrouping of Ambrym languages (Franjieh 2012: 24).

Unless indicated otherwise, the data presented in this chapter comes from original field work with native speakers of Daakaka in the villages Emiotungan and Sesevi on Ambrym island, as well as in Port Vila and the island Efate, elicited during two field trips in December 2017/January 2018 and March/April 2019. All other data stems from existing linguistic sources – primarily from the grammar description by von Prince (2015) and a corpus of natural language data (von Prince 2013). For more details see section 1.3.

7.2 Grammar sketch

Whereas Samoan has a small tradition of linguistic research, Daakaka has only recently been described. Before a descriptive grammar was published by von Prince (2015), linguistic resources have been limited to word lists in comparative literature on Ambrym languages (Tyron 1976, Paton 1973, 1971, Ray 1926). However, since the start of the DOBES documentation project run by Manfred Krifka and Kilu von Prince in 2009, there has been a growing number of publications with a focus on various aspects of the language, primarily from a semantic perspective (e.g. von Prince & Margetts 2019, von Prince 2019a, 2017b, c, 2016, von Prince et al. 2018, also Karvovskaya 2018). Other recent studies discuss phonetic (Hopperdietzel & Klingler 2019, Butz 2017) and syntactic topics (Hopperdietzel 2020b, 2018). Due to the limited amount of linguistic resources on Daakaka, work on closely related Ambrym languages, such as Krifka (2017, 2011, 2013) on Daakie, Franjieh (2012) on North Ambrym and Ridge (2019) on Vatlongos, provide valuable insights into the general structure of this language chain. With this thesis, I aim to deepen our linguistic knowledge of Daakaka morphosyntax and lexical semantics which will hopefully be extended by future research. In the following, I briefly summarize the typological and syntactic background of the language, including the status of lexical categories, argument structure and clause structure.

7.2.1 Lexical categories

In comparison with Samoan and other Oceanic languages, Daakaka exhibits rigid word classes of verbs, nouns and adjectives (see section 5.2.1 on Samoan). In particular, lexemes are defined by their lexical category, based on their ability to function as predicates, attributes or arguments without derivational morphology (von Prince 2015). An overview of the properties of the different word classes are given in Table 14:

	verbs	nouns	verbal PCs	adjectival PCs	adverbs
Predicate	yes	no	yes	no	no
Attribute	no	no	yes	yes	no
Argument	no	yes	no	(yes)	no

Table 14: The major word classes and defining features, depending on whether they can serve as predicates, attributes or arguments, without further morphology (von Prince 2015: 50)

A major distinction is made between verbal and non-verbal predicates, as the latter class requires a copula construction to function as the single predicate of a clause. This is shown in (440), where the verbal predicate $\sqrt{kuk}$ 'cook' occurs directly after the realis marker *ma*, while the adjectival predicate $\sqrt{bur}$ 'deaf' and the nominal predicate $\sqrt{tyotyo}$ 'snake' require the pre-verbal copula *i*.

(440) a. *Mwe* ***kuk-ane*** *dom* *pi~pili.* VERBAL
REAL cook-TR yam RED~red
'He cooked red yam.' (von Prince 2015: 127)

b. *Vyanten* *ente* *mw=**i*** ***bur*** ADJECTIVAL
person DEM REAL=COP deaf
'This person is deaf.' (von Prince 2015: 131)

c. *S-ok* *naana* *mw=**i*** ***tyotyo*** NOMINAL
CL3-1SG.POSS mom REAL=COP snake
'My mother is a snake.' (von Prince 2015: 261)

Likewise, verbal predicates must be derived from either the nominalizing suffix *-an* (441), or by reduplication plus the prefix *e-* which derives instrumental nominal (442).

(441) *yen* *s-aya* ***mwelili-an***
in CL-3DU.POSS be.small-NMLZ
'in their childhood' (von Prince 2015: 107)

(442) a. *tas* 'sit' → ***e-tas****~tas* 'bench, chair'
b. *kuo* 'run' → ***e-kuo****~kuo* 'vehicle'
c. *yungta* 'listen' → ***e-yung****~yungta* 'radio' (von Prince 2015: 112)

In the PC-domain, Daakaka exhibits a split between verbal and adjectival categories. While most PC-lexemes exhibit verbal features by not requiring a copula in the predicate use (443)a, adjectival PC-lexemes must co-occur with the copula *i* (443)b.

(443) a. *Yang wuonwuon nyoo ya=m* ***mwelili*** *kyun.*
fly fruitfly 3PL 3PL=REAL be.small.PL just
'The fruitflies are just small.' (von Prince 2015: 125)

b. *Vyanten ente mw=**i*** ***bur***
person DEM REAL=COP deaf
'This person is deaf.' (von Prince 2015: 131)

While some morphosyntactic processes are restricted to verbal predicates (such as reduplication), many others have been observed to apply across lexical categories. This includes transitive marking on nouns and prepositions (444) and number marking on nouns and verbs (Hopperdietzel 2020b, von Prince 2016, 2015).

(444) a. *Mwe* ***kuk-ane*** *dom pi~pili.* VERBAL
REAL cook-TR yam RED~red
'He cooked red yam.' (von Prince 2015: 127)

b. *en-ane temyap-an* NOMINAL
house-TR pray-NMLZ
'house of pray, church' (von Prince 2016: 77)

c. *Ko-m tinyo pesili-ne lee swa.* PREPOSITIONAL
2SG-REAL stand near-TR tree one
'You stand close to a tree.' (von Prince 2015: 61)

7.2.2 Argument structure and differential argument marking

Daakaka does not exhibit morphological case marking – i.e. neutral case marking. Instead, subject and object arguments are marked on the verb (Hopperdietzel 2018, von Prince 2015, also Krifka 2011 on Daakie). While the subject marker attaches to the left of the pre-verbal TMA marker (here: *ya-m*), the presence of the object is indicated by a transitive marker which attaches to the right of the root (here: *-ane*).

(445) *Vyanten nyoo ente* ***ya-m*** *kuk-**ane** dom pe~pyo.*
man 3PL DEM 3PL-REAL cook-TR yam RED~white
'The men cooked white yam.' (von Prince 2015: 295)

Notably, both subject and transitivity marking are instances of differential argument agreement – although to different features. In the following, I briefly discuss the general properties of subject and transitivity marking before returning to a more detailed analysis of transitivity marking in section 7.3.

Daakaka shows preverbal subject agreement in person and number. As is typical for many Melanesian languages, the person/number system is fairly elaborated, and includes an inclusive and exclusive distinction, as well as dual and paucal forms (cf. Lynch et al. 2002). The whole paradigm of the subject agreement marker is given in Table 15.

Person	Singular	Plural	Dual	Paucal
1st.excl	*na-*	*kinye-*	*kana-*	*kisi-*
1st.incl	--	*ra-*	*da-*	*si-*
2nd	*ko-*	*ki-*	*ka-*	*kasi-*
3rd	*ø*	*ya-*	*ye-*	*ye-*

Table 15: Paradigm of the subject agreement marker in Daakaka (von Prince 2015: 156).

Morphosyntactically, the subject marker attaches to the preverbal TMA marker, which may appear in its cliticisized form. For example, in the presence of an overt subject marker, the realis mood marker is realized as *-m* together with the subject marker (446)a.[97]

(446) a. *Vyanten nyoo ya=m du es~esi teenem.*
man 3PL 3PL=REAL stay RED~see home
'People see it [the chicken] around the village.' (von Prince 2015: 295)

[97] The presence of subject agreement on the mood marker raises the question about the interaction of overt φ-agreement and argument licensing, by the assumption that T always inherits its feature to the highest head in the verbal domain (see section 1.1.3; cf. Nie 2020). Instead, it could be argued that T/Mood itself licenses the highest argument of the clause in languages with high φ-agreement. However, it has been observed that overt subject agreement is not always linked to a specific functional head. For example, there are languages, such as Swahili, that exhibit multiple realizations of subject agreement on various functional heads (cf. Miyagawa 2017, Fuß 2005, Julien 2002 on the cross-linguistic distribution of subject agreement).

(i) ***Wa**-toto **wa**-li-kuwa **wa**-me-ki-soma ki-tabu* SWAHILI
CL2-children CL2-PST-be CL2-PRF-CL7-read CL7-book
'The children had read the book.' (Krifka 1995: 1416)

Moreover, in other languages, agreement varies according to the functional head on which it is realized. In Sengoi, for example, the past future tense marker hosts subject agreement, while in the context of the past tense marker, subject agreement 'travels' to the verb.

(ii) a. *Ke **ki**-ha muit.* b. *Guru ajeh ya **ki**-lei.* SENGOI
3SG 3SG-FUT enter teacher that PST 3SG-come
'The teacher came.' 'The teacher came.'(Means et al. 1986)

These examples also show that subject agreement is not obligatorily realized on T. Although this variation can be interpreted as overt φ-agreement being independent from nominal licensing, there is the possibility of unifying the two phenomena. If feature inheritance is understood as a copy mechanism of the φ-features from C/T to Voice/v, in which every intervening head carries a copy, then every head between C/T and Voice/v would carry a copy of that feature (Othaka 2013, building on Chomsky 2008). The distribution of overt φ-agreement could then be reduced to a language specific choice of which copy(s) get spelled-out.

(iii) $[C_{[\varphi]}\ [T_{[\varphi]}\ [\ldots\ [Asp_{[\varphi]}\ [\ Voice_{[\varphi]}\ \ldots$

For Daakaka, this analysis would imply that only the φ-features on Mood are spelled out, whereas their copy on Voice remains silent. However, such an account requires a careful examination which is beyond the scope of this thesis. For the present purpose, the locus of subject agreement does not affect the analysis in any relevant way.

b. *Puskat mwe myan tetes mon.*
cat REAL laugh again also
'The cat laughed again.' (von Prince 2015: 48)

While subject agreement is obligatory in the context of animate subjects (447)a, it is optional with inanimate subjects (447)b. Therefore, Daakaka shows a type of differential subject marking that is sensitive to the semantic feature of animacy (Becker 2014, Kalin 2014, Woolford 2008, Corbett 2006, Aissen 2003, also Ridge 2019 on Vatlongos).

(447) a. *vyanten nyoo *(ya)=m du es~esi teenem*
man 3PL 3PL=REAL stay RED~see home
'people see it [the chicken] around the village' (von Prince 2015: 295)

b. *Wotop lim ma / ?ye=m sanga*
breadfruit five REAL/ 3PC=REAL bad
'five breadfruits are bad'(von Prince 2015: 294)

In addition to subject agreement, Daakaka also exhibits transitive morphology that indicates the transitivity of the verb. In most cases, the default realization *-ane* marks the presence of an internal patient argument (448), but it can also refer to low applicatives such as goal arguments (449) (cf. Ridge 2019 on Vatlongos, Franjieh 2012 on North Ambrym, also Evans 2003 for a proto-Oceanic reconstruction **akin(i)*).

(448) a. *Angela mwe kuk.* TRANSITIVE
Angela REAL cook
'Angela cooked.'

b. *Angela mwe kuk-ane dom ente.*
Angela REALcook-TR yam DEM
'Angela cooked this yam.'

(449) a. *yaapu ente mwe vyan.* APPLICATIVE
big.man DEM REAL go
'This man went.' (von Prince 2015: 68)

b. *ø-an livis mwe vyan-ane misy-an nyosi*
CL-3SG.POSS banana.plant REAL go-TR uncle-3SG.POSS 3PC
'Her banana plant goes to her uncles.' (von Prince 2015: 61)

Notably, the transitive marker is the only derivational morphology that is related to the argument structure of the verb. Daakaka, in particular, lacks designated causative, applicative or stative/anticausative morphology, which is commonly observed in other Oceanic

languages (for example, the causative prefix fa'a- or de-agentivizing prefix ma- in Samoan; also Evans 2003). In section 7.3, I present a detailed analysis of the transitive marker in Daakaka, arguing that *-ane* is the spell-out of abstract φ-licensing on secondary licensing heads, such as Voice, Poss and *p*. As such, transitive morphology becomes a crucial diagnostic for the internal syntactic structure of Type-A-RSVCs in Daakaka.

Furthermore, arguments are frequently dropped in discourse if they can be inferred by the context. Therefore, Daakaka clauses can only consist of the verbal predicate, with subject and transitivity marking indicating the underlying presence of the arguments.

(450) a. *Vyanten nyoo ente ya-m ane we-tye.*
men 3PL DEM 3PL-REAL eat.TR fruit.of-3POSS
'The men ate its fruits.'

b. *Ya-m ane we-tye.*
3PL-REAL eat.TR fruit-3POSS
'They eat its fruits.'

c. *Ya-m ane*
3PL-REAL eat.TR
'They ate them.'

d. *Ya-m en.*
3PL-REAL eat.ITR
'They ate.'

7.2.3 Clause structure

In terms of word order, Daakaka is rigidly SVO, with a clause initial position for topicalized arguments. TMA categories are encoded by preverbal particles and as Daakaka is a mood-prominent language, with Mood as the only obligatory TMA category of a clause (von Prince 2015, also Krajinovic 2019 on Nafsan, Bhat 1999 for an overview).

(451) a. *Vyanten nyoo ya-m du tas kyu bwili wye ente.*
person 3PL 3PL-REAL PROG sit surround hole.of water DEM
'People were sitting around this pond.'

b. ***[Bwili wye ente]***$_i$ *[vyanten nyoo] ya-m du tas kyu* _____$_i$.
hole.of water DEM person 3PL 3PL-REAL PROG sit surround
'This pond, people were sitting around.' (von Prince 2015: 156)

In between the Mood marker and the verb, only a set of aspectual particles can intervene. This includes, for example, the progressive and habitual aspect marker *pwe*.

(452) *Sivi te* ***pwe*** *bang~bang myane nya na ene*
lorikeet DIST PROG RED~play with 3DU ATTR DEM
'The lorikeet used to play with the two others.' (von Prince 2015:194)

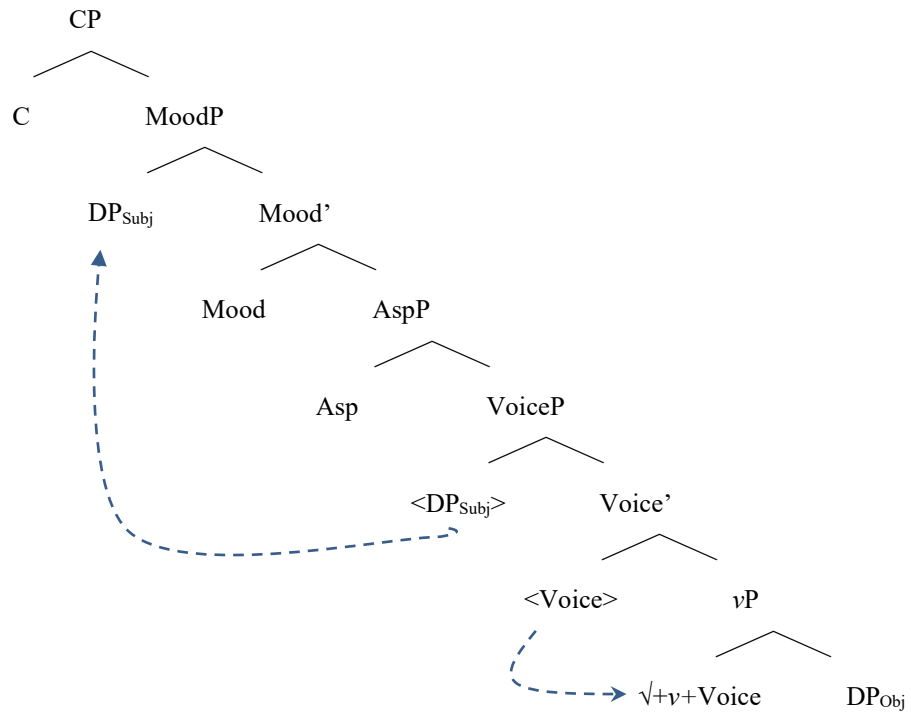
The preverbal order of functional particles mirrors the proposed hierarchical structure, which suggests that the verb does not undergo head movement into the inflectional domain (Julien 2002, Cinque 1999, Alexiadou 1997, Baker 1985 and many more).

(453) C > T/Mood > Asp > V > Voice

Thus, the relative order of functional elements in combination with SVO word order suggests that the subject moves to the clause-initial subject position, while the verb and the object stay in situ. The only exception is the transitive marker, which I assume to lower from Voice to *v* (cf. Arregi & Pietraszko 2020, Embick & Noyer 2001).[98]

[98] Note that this analysis is preliminary. In fact, there is some evidence that the verb moves to a low position in the inflectional domain, based on the distribution of adverbial particles. As in other Oceanic languages (van Urk 2019a on Imere, Ridge 2019 on Vatlongos, Massam 2013 on Niuean, also Rackowski & Travis 2000 on Malagasy), Daakaka exhibits a set of post-verbal particles that occur in between the verb and the object. Crucially, these particles are typically related to VP-internal modification. In contrast, manner SVCs or temporal adverbs occur in clause-final position (von Prince 2015).
(i) … Verb … Adverbial Particles … Object … Adverbs
It has been argued that this pattern arises from remnant VP movement to a low specifier position of a low aspectual projection (Roversi 2019 on Äiwoo, Pearce 2017, 2015 on the Central Vanuatu language Unua, also van Urk 2019a on the Polynesian outlier Imere that are both SVO). An alternative explanation may involve adverb incorporation (cf. Barrie 2011 on Blackfoot, Alexiadou 1997, Rivero 1992 on Greek, Spencer 1995 on Chuckchi) or root compounding (cf. von Prince 2019b). To distinguish between the different analyses, a careful examination of scope dependencies of post-verbal adverbial particles is required in future research. In the following, I mention when this issue may have minor effects on the argumentation.

(454)



7.2.4 Summary

The 'Melanesian' language Daakaka differs from the Polynesian language Samoan in several respects. On the one hand, Daakaka exhibits a clear distinction between word classes, as lexemes are restricted according to their lexical category. On the other hand, it has transitive morphology on the verb, rather than designated causative morphology. Moreover, Daakaka does not have morphological case but subject agreement, and exhibits an SVO word order.

7.3 Transitivity marking as Voice morphology

Like other 'Melanesian' languages, Daakaka exhibits a pattern of transitivity marking, which I will show correlates with the morphosyntactic size of the objects (cf. Næss 2013 on Äiwoo, Margetts 2008 on Western Oceanic, Sugita 1973 on Micronesian languages among others). As a result, regular DP objects trigger transitive marking on the verb (455)a, whereas objects lacking a D-layer pattern with the intransitive verb form (455)b.[99]

[99] This section represents a greatly revised version of Hopperdietzel (2020b).

(455) a. *Angela mwe kuk-**ane** dom ente.*
Angela REALcook-TR yam DEM
'Angela cooked *this* yam.'

b. *Angela mwe kuk (dom).*
Angela REAL cook yam
'Angela cooked yam.'

Based on the observation that structurally reduced arguments are phrasal, I argue that transitive marking is governed by the same principles as PNI in Polynesian languages (cf. section 5.2.2.2; Collins 2017, Levin 2015, Massam 2001, also Aissen 2003, Bossong 1991, Silverstein 1976 on differential object marking (DOM)). As the distribution of the transitive marker is not limited to the verbal domain, I argue that transitive morphology is actually the spell-out of secondary licensing heads (Voice, Poss, *p*).

7.3.1 Pseudo noun incorporation in Daakaka

In Daakaka, many transitive verbs have been described to cross-reference the specificity of their objects (von Prince 2015): In (456)a, the transitive verb *min* 'drink' occurs in its bare form together with an unspecific object *kava*. In contrast, if the object is specific, as indicated by the demonstrative *ente*, the verb is derived by the transitive marker *-i*.[100]

(456) a. *Bong mwe min kava.*
Bong REAL drink kava
'Bong drank kava.'

b. *Bong mwe min-**i** kava ente.*
Bong REAL drink-**TR** kava DEM
'Bong drank this kava.' (von Prince 2015)

The transitive marker is subject to allomorphy idiosyncratically determined by the root. The most common transitivity marker is *–(a)ne*, which is also the only transitive marker that is synchronically productive.

[100] As in other Austronesian languages, determiners may be silent in Daakaka (cf. Paul et al. 2016 on Malagasy). If bare objects combine with verbs that exhibit transitive marking, the presence, or absence, of the transitive marker gives rise to a particular interpretation. If the transitive marker is absent, the object is interpreted as unspecific (i)a, if it is present, the object receives a specific interpretation (i)b.

(i) a. *Ma min kava.*
REAL drink kava
'He drinks kava.'

b. *Ma min-i kava.*
REAL drink-TR kava
'He drinks the kava.' (von Prince 2015: 55)

(457) a. *Mwe yas webir.*
REAL steal breadfruit
'She stole breadfruit.'/'She is a breadfruit thief.'

b. *Mwe yas-**ane** webir ente.*
REAL steal-**TR** breadfruit DEM
'She stole the breadfruits.' (von Prince 2015: 60)

In other cases, the transitive marker also alters the morpho-phonological structure of the root. In (458), the definite object is not only marked by the suffix *–se* but also by a lowering and lengthening of the vowel of the final syllable. Additionally, many verbs exhibit root suppletion in the context of a definite object (459).

(458) a. *Angela mwe tewes tan.*
Angela REAL swipe ground
'Angela swept floors.'

b. *Angela mwe **towaase** tan ente.*
Angela REAL swipe.OM ground DEM
'Angela swept this floor.'

(459) a. *Bong mwe en webir.*
Bong REAL eat taro
'Bong ate taro.'

b. *Bong mwe **ane** webir ente.*
Bong REAL eat.**OM** taro DEM
'Bong ate this taro.'

Table 16 provides an overview of the various allomorphs of the transitivity marker.

Transitivity marker	Root	Root-TR	Meaning
=(a)ne	*doko*	*doko-ne*	'pull'
	kuk	*kuk-ane*	'cook'
(CV_1C)-V_1	*lung*	*lung-u*	'wrap'
	min	*min-i*	'drink'
-se	*vyo*	*vyo-se*	'carry'
	ves	*vyaa-se*	'kick'
suppletive	*eli*	*kii*	'dig'
	en	*ane*	'eat'

Table 16: Transitive and unergative verb forms of Daakaka manner verbs (von Prince 2015: 56).

The data presented so far suggests that transitive marking in Daakaka is sensitive to the semantic category of specificity.[101] This hypothesis predicts that non-specific, indefinite objects do not induce transitivity marking. However, this prediction is not borne out, as the transitive marker co-occurs with the non-specific, indefinite quantifier *tuswa* 'any, a' (von Prince 2017c).

(460) a. * *Bong mwe en webir* ***tuswa****?* UNSPECIFIC INDEFINITE
Bong REAL eat taro NONSPEC
Intended: 'Did Bong eat any Taro?'

b. *Bong mwe* ***ane*** *webir* ***tuswa****?*
Bong REAL eat.**OM** taro NONSPEC
'Did Bong eat any Taro?'

Therefore, the example in (460) indicates that it is not semantic features such as specificity that trigger transitive marking, but the syntactic size of the object. Support for this claim comes from objects modified by relative clauses (461) and demonstratives (462) which are related to the presence of D-layer, and trigger transitivity marking on the verb.

(461) a. * *Bong mwe en webir mw-i ló.* RELATIVE CLAUSE
Bong REAL eat taro REAL-COP two
Intended: 'Bong ate two pieces of taro.'

b. *Bong mwe* ***ane*** *webir mw-i ló.*
Bong REAL eat.**OM** taro REAL-COP two
'Bong ate two pieces of taro.'

(462) a. * *Bong mwe en webir ente.* DEMONSTRATIVES
Bong REAL eat taro DEM
Intended: 'Bong ate this taro.'

b. *Bong mwe* ***ane*** *webir ente.*
Bong REAL eat.**OM** taro DEM
'Bong ate this taro.'

[101] It has been shown that DOM is commonly related to the animacy or specificity of the object. Cross-linguistically, DOM languages differ as to which scale(s) determine DOM and where along the scales the cut off is made (Kalin 2018, Corbett 2006, Aissen 2003).
(i) a. Animacy
1/2 > 3 Pronoun > Name > Human > Animate > Inanimate
b. Specificity
Pronoun > Name > Definite > Specific Indefinite > Nonspecific

Further to this, transitive marking is sensitive to number irrespective of specificity (463). Assuming an extended nominal projection, this pattern suggests that transitive marking is sensitive to both the presence of a D- and Num-layer (cf. Alexiadou et al. 2007).

(463) a.* *Bong mwe en ó nyoo.* NUMBER MARKING
Bong REAL eat coconut PL
Intended: 'Bong ate coconuts.'

b. *Bong mwe* ***ane*** *ó nyoo.*
Bong REAL eat.**OM** coconut PL
'Bong ate coconuts.'

However, the lack of transitive marking does not imply that the object is incorporated into the verb (cf. Massam 2009a, Baker 1988). The object can be modified by possessor (464) and adjectival phrases (465) without triggering transitive marking if the object takes on an unspecific, indefinite (number neutral) interpretation.[102]

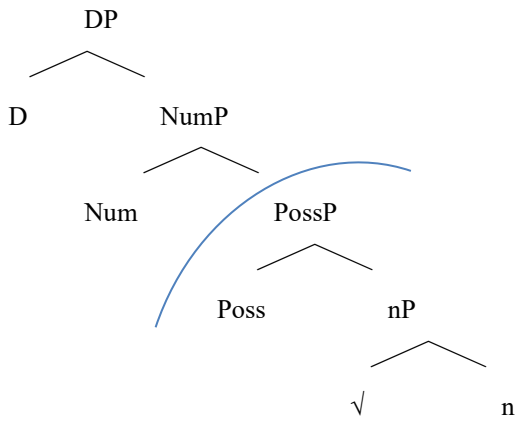
(464) *Bong mwe en webir ø-e Byongkon.* POSSESSION
Bong REAL eat taro CL2-ATTR Byongkon
'Bong ate Byongkon's taro.'
(as a general rule, or: some taro that belongs to Byongkon; von Prince 2015: 54)

(465) *Bong mwe en webir pe~pyo.* ATTRIBUTES
Bong REAL eat taro RED~white
'Bong ate white taro.' (von Prince 2015: 54)

To summarize, the data presented in this section suggests that transitive marking in Daakaka is not determined by the semantic feature of specificity, but by the syntactic size of the object. Assuming an articulated structure of the DP (Alexiadou et al. 2007), I propose that the presence of high functional projections such as DP or NumP triggers transitive marking, while the presence of lower functional projections such as *n*P or PossP do not. Note that the reduced morphosyntactic structure also gives rise to an unspecific, indefinite and number neutral interpretation (cf. Krifka & Modarresi 2016, Dayal 2003).

[102] Recently, it has been highlighted that in some languages, phrasal constituents might also be incorporated into the verb (e.g. van Urk 2019b, Barrie & Mathieu 2016).

(466)



Notably, the morphosyntactic size also influences the movement of the object out of its base-generated position. Whereas DP-objects may be topicalized by moving to a clause-initial position, a reduced object must be adjacent to the verb (cf. von Prince 2015: 273).

(467) a. *ó ente*$_i$ *Bong mwe* ***ane*** ____$_i$.
coconut DEM Bong REAL eat.**OM**
'This coconut, Bong ate (it).'

b. **ó Bong mwe en* ____$_i$.
coconut Bong REAL eat.
Intended: 'Coconuts, Bong ate.'

The characteristics of this type of DOM resemble the morphosyntactic and semantic properties of differential case marking in languages that exhibit PNI, such as Polynesian VSO languages (e.g. Collins 2017 on Samoan, Medeiros 2013 on Hawai'ian, Massam 2001 on Niuean; see section 5.2.2.2 for a detailed overview of the properties of PNI in Samoan). The languages differ only in the kind of DOM that results from the structure.

	PNI-CASE (e.g. Samoan)	**PNI-TR** (e.g. Daakaka)
Differential…	case marking	transitive marking
linear adjacency	yes	yes
phrasal XP	yes	yes
reduced DP	yes	yes
number neutral	yes	yes

Table 17: Features of pseudo-noun incorporation in languages with overt case and transitive marking.

7.3.2 Distribution of the transitive morphology

In the previous section, I have demonstrated that the transitive marker shows up on transitive verbs that take DP-objects. However, von Prince (2015) observes that the occurrence of the object marker is not restricted to transitive verbs, but is also attested in other environments outside the verbal domain.

7.3.2.1 Causative formation

Some stative unaccusative verbs like *nak* 'be.ready' undergo a stative-causative alternation, by functioning as transitive change-of-state verbs (468) (see section 7.4.1 for a detailed discussion). In the causative form, the internal argument is cross-referenced on the verb by the object marker *–ane*, while in its stative use, the verb occurs in its bare form (see also Franjieh 2012 on object marking in closely related North Ambrym).

(468) a. *Mees ma nak~nak.*
Food REAL RED~ready
'The food is ready.'

b. *Ya-m nak~nak-**ane** mees mo nok.*
3PL-REAL RED~ready-TR food REALfinish
'They prepared the food.' (von Prince 2015: 61)

Therefore, the transitivity marker does not indicate the presence of a DP-internal argument per sé, but is restricted to transitive configurations.

7.3.2.2 Prepositions

Outside of the verbal domain, the transitive marker appears on many prepositions. For example, the locational adverb *pesili* 'nearby' can be used prepositionally, if it introduces a DP argument. In this function, the preposition is suffixed by the object marker *–ane* (von Prince 2015: 61).

(469) a. *Na-m ling-i dal-uk nyoo pesili.*
1SG-REAL put-TR egg-1SG.POSS 3PL near
'I laid my eggs nearby.'

b. *Ko-m tinyo pesili-**ne** lee swa.*
2SG-REAL stand near-TR tree one
'You stand close to a tree.' (von Prince 2015: 61)

Although most prepositions do not alternate with an adverbial usage, several prepositions are marked by *-(a)ne*, including *my-ane* 'with, to', *(a)ne* 'with', *meto-ne* 'from' and *ku-ane* 'at the home of' (von Prince 2015).

7.3.2.3 Possession

The object marker also occurs in the nominal domain (von Prince 2016, 2015). Here, the transitivity marker co-occurs with DP possessors that are in an inalienable relationship with the possessum. In (470)a, the unpossessed noun *bura* 'blood' occurs in its bare form. If an inalienable possessor (here: *vyanten ente* 'this person') is introduced in the structure, *bura* is suffixed by the transitivity marker (470)b.

(470) a. *bura* *ente*
blood DEM
'this blood'

b. *bura-**ne*** *vyanten ente*
blood-TR person DEM
'this person's (own) blood' (inalienable; von Prince 2016: 70)

In contrast, alienable possessors are introduced by additional morphosyntactic material that is sensitive to both the class of the possessed noun and the phi-features of the possessor. Crucially, alienable possessors do not trigger transitivity marking.

(471) *bura* *ø-e* *vyanten ente*
blood CL2-ATTR person DEM
'this person's (animal) blood' (alienable; von Prince 2016: 70)

As a result, the choice of morphological marking of possessors also gives rise to a specific alienable/inalienable interpretation (461)b/(462) (von Prince 2016, but see Karvovskaya 2018 for an alternative analysis).

7.3.2.4 Summary

To summarize the distribution of the transitivity marker, the marker occurs across domains in (a) the verbal domain to mark the presence of DP-objects, (b) the nominal domain to cross-reference inalienable possessors on the possessed noun, and (c) the prepositional domain on prepositions derived from adverbial particles.

7.3.3 Transitivity marking and secondary licensing

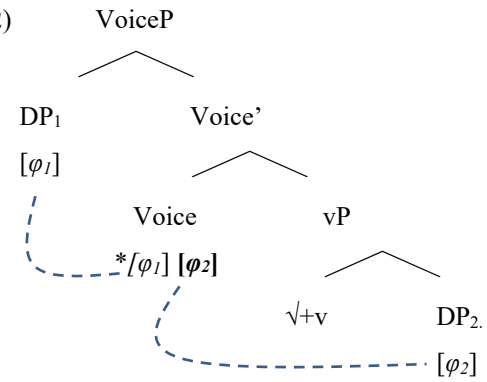
Building on the account of nominal licensing as outlined in section 1.1.3, I propose a unified analysis of transitivity marking across domains in Daakaka, relating transitive morphology to the spell-out of licensing features on secondary licensing heads, such as Voice, *p* and Poss (Kalin 2018, Rezac 2011, Bobaljik 1993, Levin & Massam 1985). In particular, I suggest that the presence of transitive morphology is the overt spell-out of a successful φ-feature checking of a weak licenser feature, introduced by secondary licensing heads (cf. Nie 2017, Deal 2010). In contrast, in the absence of an internal argument, the secondary licensing feature on Voice does not get checked, and remains silent (Preminger 2014 for unchecked φ-feature that do not crash the derivation).

The crucial assumption is that primary and secondary licensing features differ as to whether they need to be checked by a DP. On the one hand, the primary licenser is the highest verbal head in the clause, which inherits a strong licensing feature *[φ] from T – i.e. non-embedded Voice in the context of transitive and unergative verbs, as well as *v* in the context of unaccusative verbs (cf. Nie 2020). As the primary feature is EPP-like, it needs to be checked, for example, by an externally merged DP in Spec, VoiceP (or Spec, *v*P respectively) or via movement of the internal argument (cf. section 5.2.2.3 on Samoan). On the other hand, secondary licensing heads independently introduce additional nominal licensing features. In contrast to the primary licensing feature, secondary licensing features are weak features that check their goals in situ. Generally, Voice can be assumed to exhibit a secondary licensing feature, as it licenses the internal argument in transitive contexts (Nie 2020, Legate 2014, Burzio 1986).[103]

With the assumption that Voice is a secondary licenser in Daakaka, Voice carries two sets of licensing features, i.e. a strong (primary) licenser feature inherited from T as well as a weak (secondary) licensing feature. In transitive contexts, the secondary licensing feature checks the φ-features of the internal argument, which get licensed in-situ, whereas the external argument checks the primary licensing features and satisfies the EPP-feature.

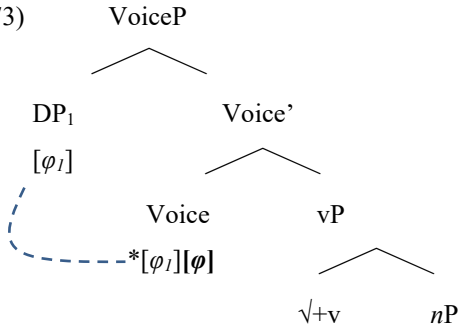
[103] However, the locus of secondary licensing features may vary from language to language (cf. Nie 2020, Kalin 2018). In Samoan, for example, I have argued that Voice is not a secondary licenser. Instead, *v* can be a secondary licenser in the context of transitive middle verbs, where it assigns inherent oblique case.

(472)



In the context of unergative verbs or structurally reduced PNI-arguments that do not require abstract licensing, the secondary licensing feature fails to find a goal in its c-command domain. As pointed out in section 5.2.2.2, structurally reduced nP-objects do not carry φ-features, and therefore do not get licensed (cf. Longobardi 2008, Massam 2001, Szabolcsi 1987, but see van Urk 2019b, Levin 2015, Baker 2014 for the hypothesis that PNI/DOM arguments are licensed by other means). Consequently, the secondary licensing feature remains unchecked as the external argument checks the strong φ-feature inherited from T only (cf. Halpert 2015, Preminger 2014).

(473)



Building on the insights of Nie (2017) and Deal (2010), I relate transitive morphology to the checking of φ-features on Voice. If the secondary licensing feature is checked, it is spelled-out as the transitive marker.

(474) Voice *[φ1] **[φ2]**

↔	(CVC)-**V**	/ _ {$\sqrt{min}$, $\sqrt{lung}$, …
↔	***-se***	/ _ {$\sqrt{ves}$, $\sqrt{vyo}$, …
↔	**suppletion**	/ _ {$\sqrt{eli}$, $\sqrt{en}$, …
↔	**-ø**	/ _ {$\sqrt{tu}$, $\sqrt{sear}$, …
↔	***=ane***	elsewhere

In the absence of overtly realized intervening syntactic heads such as causative or applicative morphology, root suppletion in transitive contexts satisfies the locality conditions

on root suppletion (cf. Moskal 2015, Embick 2010; but see section 8.2.2.3 for a more detailed analysis).

In contrast, if the secondary licensing feature is unchecked as it is in unergative or PNI-configurations, Voice is not overtly spelled-out.

(475) Voice *[φ_1] **[φ]** ↔ ø

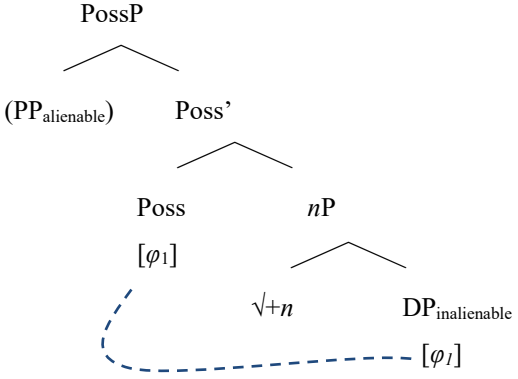
In the context of unaccusative verbs, *v* exceptionally inherits a single licensing feature from T, as it is the highest functional head in the verbal domain. Therefore, the absence of transitive morphology on unaccusative verbs is predicted by the absence of a secondary licensing feature.

To summarize, I have argued that transitivity marking in Daakaka is related to checking of a (secondary) licensing features on Voice in the presence of an (internal) DP-argument in its c-command domain. Therefore, transitive morphology links to the cross-linguistic licensing abilities of Voice in a transparent way.

7.3.4 Excursus: Secondary licensing across domains

I will now briefly sketch out how a theory of secondary licensing explains the distribution of transitive morphology in Daakaka. In the nominal domain, different types of possessor DPs merge in different structural positions. While inalienable possessors are merged as complements of *n*, alienable possessors are merged in the specifier of PossP (Myler 2016, Tomioka & Sim 2007, Alexiadou 2003). As arguments within the DP are invisible for abstract licensing from the outside, I suggest that Poss functions as a secondary licenser in the nominal domain (adopting the idea of CP/DP parallelism). Independent evidence for this assumption comes from the observation that possessors are available in reduced PNI structures (464). Therefore, if an inalienable possessor DP merges to the *n*P, Poss licenses the possessor by φ-agreement, and the checked φ-feature on Poss is realized by the elsewhere morpheme -ane.

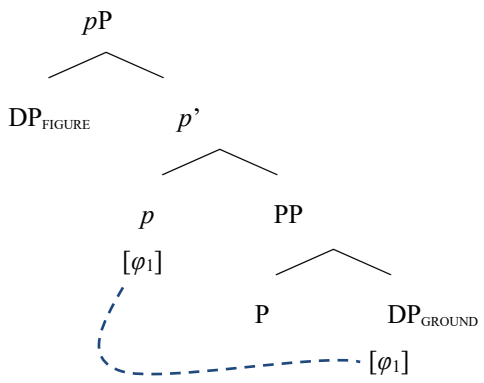
(476)



In contrast, alienable possessors do not trigger transitivity marking on the possessed noun as they are merged as PPs in Spec, PossP.[104] Consequently, in this case, the φ-feature on Poss remains unchecked and transitive morphology does not occur on the Possessum.

In the prepositional domain, Svenonius (2003) argues for two argument positions. While *ground* DPs are merged as the complement of P, *figure* DPs are introduced in the specifier of *p*. This, again, mirrors the transitive structure of the verbal and nominal domain. As *figure* DPs are licensed outside of the prepositional domain (by Voice), it has been argued that *ground* DPs are licensed within the prepositional domain (presumably *p*; Richards 2017). As DPs embedded under *p* are invisible for an outside probe (cf. Alexiadou et al. 2014b), I suggest *p* to be a secondary licenser in the prepositional domain. Therefore, *p* bears a secondary licensing feature that gets checked by the embedded *ground* DP. Consequently, the φ-feature is spelled-out as transitive morphology on the preposition.

(477)



In sum, I have analyzed that transitive morphology is the spell-out of a checked abstract licensing feature φ on secondary licensing heads, such as Voice, Poss and *p*. Therefore, transitive morphology across domains derives naturally from basic syntactic principles. This relates to the attempt of reducing argument-introducing heads to a single *i** head (Kastner 2020, Wood & Marantz 2017, Oseki 2017).

7.3.5 Summary

In this section, I have demonstrated that the distribution of transitive morphology in Daakaka is determined by the same features of differential case marking in Polynesian

[104] As alienable possessors are introduced by a classifier+linker construction, the nominal licensing of alienable possessors depends on the analysis of this construction. One option is to interpret the classifier as a prepositional head agreeing with the class of the DP in its complement position. The linker *-e* then represents a heavily reduced variant of the transitivity marker *-ane.* Cross-linguistic support for this assumption comes from closely related North Ambrym, in which the classifier still exhibits overt φ-agreement (Franjieh 2012, but see Wang 2019 on classifiers as Poss heads in Fijian).

languages. As such, I have analyzed the absence of transitive marking in the context of structurally reduced *n*P-arguments as an instance of PNI in a language without morphological case. Based on the observation that transitive morphology also occurs in the nominal and prepositional domain, I have argued that the transitive marker is the spell-out of a valued licensing feature on secondary licensing heads (Voice, Poss, *p*). In the following sections, the presence of transitive morphology will become a crucial diagnostic for the syntactic structure of Type-A-RSVCS.

7.4 Causative verbs and the serialization condition

While Oceanic languages commonly exhibit some reflex of the proto-Oceanic causative prefix **pa(ka)-* (Evans 2003, Ross 1988, Pawley 1973, 1972), Daakaka and other Ambrym languages have lost this prefix completely (Ridge 2019, von Prince 2015, Franjieh 2012, cf. Bradshaw 2010b for a similar observation in Oceanic languages spoken in mainland PNG). As a result, Daakaka does not have designated causative morphology (unlike Samoan, as discussed in part II). Instead, Daakaka exhibits alternative strategies to express causative meaning. On the one hand, causative predicates can be derived from stative property concept roots, which appear with the transitive suffix *-(a)ne* in the causative form. However, this process is lexically restricted to certain verbal PC roots only. On the other hand, a group of verbs is ambiguous, varying between manner or causative result meaning (cf. English *cut*-type verbs in section 2.2.3; Levin & Rappaport Hovav 2013). On top of this, Daakaka exhibits a set of basic causative verbs. Crucially, all verbs expressing causative semantics must combine with manner verbs in Type-A-RSVCs.[105]

7.4.1 Causative formation

As outlined in section 7.2.1, Daakaka exhibits two classes of property-concept lexemes: (i) verbal PC-roots which can function as the stative unaccusative verbs in their underived form, and (ii) adjectival PC-roots which require the presence of the copula *i* (von Prince 2015).

[105] I focus here on lexical causative verbs. In addition, Daakaka exhibits periphrastic causatives that are formed with the causative light verb *gene* 'do, make', which takes a subordinated clause (von Prince 2015).
(i) *Os mwe gene tisot mwe nir~nir.*
rain REAL make T-shirt REAL RED~wet
'The rain made the T-shirts wet again.' (Hopperdietzel 2020a: JPH1-021)

(478) a. *Lee ente ma* ***mwelili***$_{V}$**.** VERBAL PC
tree DEM REAL be.small
'The tree is small.'

b. *Tów-an mw=**i*** ***towo***$_{ADJ}$**.** ADJECTIVAL PC
belly-3SG.POSS REAL=COP big
'Her belly is big.' (von Prince 2015: 126)

Notably, only verbal PC-lexemes can participate in the causative formation where a stative PC-verb, such as *mwelili* 'be.small', combines with the transitive suffix *-ane* to indicate a transitive, causative meaning (e.g. *mwelili-ane* 'to make small').

(479) a. *Bong ma ta* ***mwelili-ane*** *lee ente.*
Bong REAL cut.ITR be.small-TR tree DEM
'Bong cut the tree small.'

b. *Angela mwe tewes* ***mesaa-ne*** *tan ente.*
Angela REAL sweep.ITR be.clear-TR floor DEM
'Angela cleared the floor by sweeping it.'

However, derived causatives merely function as the sole predicate of clause, and primarily occur as the result-denoting V2 in Type-A-RSVCs (see Kraußе et al. 2019 for a similar observation in Vurës). Therefore, dropping the manner V1 in the examples above leads to ungrammaticality.[106]

(480) * *Bong ma* ***mwelili-ane*** *lee ente.*
Bong REALsmall-TR tree DEM
'Bong made the tree small.'

This contrasts with adjectival PC-predicates like *towo* 'big' which do not participate in the causative formation process.

(481) * *Bong mwe doko* ***towo-ne*** *tisot ente.*
Bong REAL pull.ITR big-TR t-shirt DEM
Intended: 'Bong pulled the t-shirt wide.'

This categorical split is reminiscent of the hypothesis by Koontz-Garboden (2007a, 2005) that non-verbal PC-predicates cannot express change-of-state meaning in the absence of

[106] Note that the causative formation is subject to lexical variation with some verbal PC-lexemes like *nirnir* 'be.wet' rejecting causativization altogether and other verbal PC-lexemes like *naknak* be.ready' that can occur outside of RSVCs (von Prince 2015, 2013). Therefore, additional research is necessary to determine lexical restrictions of this morphosyntactic process.

causative morphology (also Krajinovic 2019 on Nafsan). To express a causative or resultative meaning, adjectival PC-predicates must appear in a multiple-marking RSVC in which they are introduced by a copula construction.

(482) *Adam* ***ma*** ***doko-ne*** *tisot* *ente* ***mw=i*** ***towo.***
Adam REALpull-TR t-shirt DEM REAL=COP big
'Adam pulled the t-shirt wide.'

In general, multiple-marking SVCs are less marked and more productively used by the speakers, as there is no restriction on the lexical or categorical type of the PC-predicate.

(483) a. *Bong* ***mwe te*** *lee* *ente* ***ma*** ***mwelili.***
Bong REALcut.TR tree DEM REALbe.small
'Bong cut the tree small.'

b. *Angela* ***ma*** ***towaase*** *tan* *ente* ***ma*** ***mesaa.***
Angela REALsweep.TR ground DEM REAL be.clear
'Angela swept the floor clean.'

In conclusion, serialization is a necessary condition for the causativization of verbal PC-predicates as the causative form solely appears in Type-A-RSVCs. In the following, I show that this observation extends to causative predication in general.

7.4.2 Manner/result ambiguity

In Daakaka, some verbs are ambiguous between manner and result use, in that the underived root denotes either the manner of an action or the result state of an underspecified action. However, this class of verbs does not contradict the manner/result complementarity, as both meanings are in complementary distribution (see section 2.2.3 on English *cut*-type verbs; cf. Ausensi to appear, Levin & Rappaport Hovav 2014, 2013, Rappaport Hovav & Levin 2010). This group of verbs includes roots like *tiwiye*, which either denotes a 'prototypical breaking-action' without entailing a result state, or purely specifies a broken result state. Crucially, if such roots are used as causative result verbs, they are subject to a serialization condition.

(484) a. *Bong* *ma* ***tiwiye*** *pwesye.*
Bong REAL break.action.TR branch
'Bong broke branches with his hands.'

b. *Bong ma ta* ***tiwiye*** *lee ente.*
Bong REAL cut.ITR break.TR tree DEM
'Bong broke the branches by cutting it.'

Building on the manner/result diagnostics presented in section 2.2. I demonstrate how the respective verbs differ in their morphosyntactic and semantic properties.

7.4.2.1 Combinatorial restrictions on instrumental modification

In the context of manner verbs, instrumental modification has been shown to be sensitive to the manner component of the verb. As such, only instruments that satisfy this manner component can act as modifiers (see section 2.2.1.1 and section 5.4.1.1 on Samoan; cf. Anagnostopoulou 2017, Levin & Rappaport Hovav 2011). This is shown by the examples below. In (485)a, *kase* 'wash' refers to an action of cleaning that necessarily involves water. Therefore, *sop* 'soap' is a felicitous instrument to be used in an action denoted by *kase*, while *etewes* 'broom' is not. The same intuition holds for (485)b-c, as a *sweeping*-action cannot be performed by an axe, and a *cutting*-action necessarily involves a blade.

(485) a. *Angela ma* ***kase*** *tisot ente* ***ane*** ***sop*** / ***# etewes.***
Angela REAL wash.TR T-shirt DEM with soap broom
'Angela washed the t-shirt with soap / *with a broom.'

b. *Adam ma* ***towaase*** *tan ente* ***ane*** ***etewes*** / ***# tee.***
Adam REAL sweep.TR ground DEM with broom axe
'Adam swept the floor with a broom / *with an axe.'

c. *Bong mwe* ***te*** *lee ente* ***ane*** ***tee*** / # ***vy-an.***
Bong REAL cut.TR tree DEM with axe hand
'Bong cut the tree with an axe / * with his hand.'

Another class of verbs denotes somewhat proto-typical actions performed by a human agent with therir hand, rather than an instrument. For example, in (486)a, *tiwiye* describes the attempt of an agent to break an object by applying manual force without entailing the actual break, i.e. a proto-typical *breaking* action. In (486)b, *sengave* 'denotes' the attempt of an agent to open an object by manually pulling or pushing it without implying the actual opening, i.e. a proto-typical *opening*-action. Crucially, both predicates refer solely to the action as a result state does not have to be obtained. In the context of these manner verbs, instruments other than human body parts (e.g. hands) are not felicitous.

(486) a. *Bong ma **tiwiye** pwesye ente **# ane tee.***
Bong REAL break.action.TR branch DEM with axe
'Bong broke the stick with his hands.'

b. *Adam mwe **sengave** beleem ente **# ane tee.***
Adam REAL open.action.TR door DEM with axe
'Adam opened the door with his hands.'

In the result use, these verbs can drop their manner component, and solely denote the result state typically held if the action denoted by the manner verb is successful. Therefore, *tiwiye* as a result verb denotes an underspecified action that causes a 'broken' state. The availability of various manner-denoting V1s in Type-A-RSVCs illustrates the underspecified nature of the causing action denoted by the result use of *tiwiye* 'break'.

(487) a. *Bong ma **ta** **tiwiye** pwesye ente ane tee*
Bong REAL cut.ITR break.TR branch DEM with axe
'Bong broke the stick by cutting it.'

b. *Bong ma **tas** **tiwiye** pwesye ente.*
Bong REAL sit break.TR branch DEM
'Bong broke the stick by sitting on it.'

c. *Bong ma **tiwir** **tiwiye** pwesye ente.*
Bong REAL break.action.ITR break.TR branch DEM
'Bong broke the stick by breaking it with his hand.'

As shown in (487)c, the manner and result verb of the same root can be combined in Type-A-RSVCs. Note that the meaning is not redundant, since the V1 solely denotes the manner, while the V2 denotes the result of the complex resultative predicate.

7.4.2.2 Combinatorial restrictions on internal argument

In addition, the selectional restriction on the internal argument may be determined by a manner or result component in different ways. If a verb has a manner component, the internal argument must be able to satisfy the patient role of the event. In contrast, in causative predicates, the internal argument must be able to satisfy the holder role of the result state. Consequently, the infelicity of the examples in (488) arise from different semantic restrictions (Levin 2019, Kratzer 2005, Levin & Rappaport Hovav 1995 *inter alia*; cf. section 3.1.2).

(488) a. *Mary drank # the tea pot / the tea.*
b. *Mary filled the tea pot / # the tea.*

While a *drinking*-action necessarily involves some liquid (e.g. *tea*), a *filling*-event requires a container that can be filled (e.g. a *teapot*).

These constraints can also be observed in the manner/result ambiguity in Daakaka. In (489), both examples are infelicitous as the internal arguments do not satisfy the manner components of the predicates: *tiwiye* denotes a proto-typical attempt at breaking which can be performed on a rather small, long object (like a branch or a stick), but not on a tree; *sengave* denotes a proto-typical movement involved in an *opening*-event (e.g. of a door or a coconut) which cannot be performed on a road.

(489) a. *Bong ma tiwiye **pwesye** / ***lee** ente.*
Bong REALbreak.action branch tree DEM
'Bong broke the branch / * the tree with his hands.'

b. *Adam ma sengave **beleem** / ***rod** ente.*
Adam REALopen.action door / road DEM
'Adam opened the door / the road with his hands.'

In contrast, if *tiwiye* or *sengave* occur as result verbs in Type-A-RSVCs, the selectional restrictions on the internal argument disappear, as the verbs solely denote the result state of an underspecified causing event.

(490) a. *Bong ma ta tiwiye **pwesye** / **lee** ente.*
Bong REAL cut break.action branch tree DEM
'Bong broke the branch / * the tree with his hands.'

b. *Adam ma ta sengave **beleem** / **rod** ente.*
Adam REALcut open.action door / road DEM
'Adam opened the door / the road with his hands.'

Crucially, this causative interpretation is only available in Type-A-RSVCs, as in isolation both verbs are always interpreted as manner verbs. [107]

[107] In contrast to the internal argument, Daakaka manner and causative verbs are subject to the same constraints on external arguments, in that they strongly prefer agentive external arguments. Nonetheless, natural and non-volitional external arguments are still felicitous with many manner verbs under a personification reading or in lexicalized expressions. Instrumental subjects are always infelicitous.
(i) a. *Bong / byata / # eng mwe te lee ente.* b. *Bong / ren / # sop ma kase tisot.*
Bong lightning wind REALcut.TR tree DEM Bong rain soap REALwash.TR T-shirt
'Bong/ A lightning / # the wind cut the tree.' 'Bong/ the rain / #soap washed the T-shirt.'
The availability of causer subjects might be influenced by the (optional) presence of a silent result state in the structure (cf. optionally causative manner verbs in French; Alexiadou et al. 2017). In fact, in the context

7.4.2.3 Object deletion and pseudo noun incorporation

In contrast with Samoan, the distribution of manner and result components in Daakaka is sensitive to object deletion (cf. section 2.2.1.3 and 5.4.1.3). As predicted, only manner verbs that do not entail a result state allow for object deletion, while bi-eventive causative verbs do not (cf. argument-per-subevent condition; Levin & Rappaport Hovav 2001). Crucially, the presence of an object is indicated on the verb by the presence of the transitive marker or suppletion. In the context of a full DP-argument in (491), manner verbs appear in their transitive form (see section 7.3).

(491) a. *Bong mwe* ***te*** *lee ente.*
Bong REAL cut.TR tree DEM
'Bong cut the trees.'

b. *Angela ma* ***kase*** *tisot ente.*
Angela REAL wash.TR T-shirt DEM
'Bong washed the T-shirt.'

c. *Bong ma* ***tiwiye*** *pwesye ente.*
Bong REAL break.action.TR tree DEM
'Bong broke the branches with his hands.'

If the object is deleted or pseudo-incorporated, manner verbs appear in their intransitive verb form. Note that *tiwiye* in its manner variant behaves like other manner verbs (492).

(492) a. *Bong ma* ***ta*** *(lee).*
Bong REAL cut.ITR tree
'Bong cut trees.'

b. *Adam mwe* ***kyes*** *(tisot).*
Adam REAL wash.ITR T-shirt
'Adam washed t-shirts.'

---

of a causer argument, the result interpretation is obligatory and cannot be denied). Crucially, object deletion and pseudo noun incorporation is judged to be only marginally acceptable in the context of natural causers, which provides further evidence for the presence of a result state.

(ii) a. *Byata mwe te lee ente.*
lightning REAL cut.TR tree DEM
'The lightning cut the tree.'

b. ?? *Byata ma ta lee.*
lightning REAL cut.ITR tree
'The lighting cut trees.'

As pointed out by Alexiadou et al. (2017), the presence of a silent result state may be sufficient to license a causer external argument in the context of manner verbs. However, the data on combinatorial restrictions on external arguments is rather unclear, which is why I hesitate to use it as a significant diagnostic here.

c. *Bong ma* ***tiwir*** *(pwesye).*
Bong REAL break.ITR branch
'Bong broke (branches) with his hands.'

In contrast, object deletion and PNI become unavailable in the causative use. The intransitive verb form is ungrammatical in this context.

(493) a. # *Bong ma ta* ***tiwir*** *(lee).*
Bong REAL cut.ITR break.ITR tree
'Bong broke trees by cutting it.'

b. # *Bong ma ta* ***sengep*** *(beleem).*
Bong REAL cut.ITR open.ITR door
'Bong broke doors by cutting.'

Therefore, the absence of PNI indicates that ambiguous verbs only have a result component in their causative variants.

7.4.2.4 Suppletive paradigms

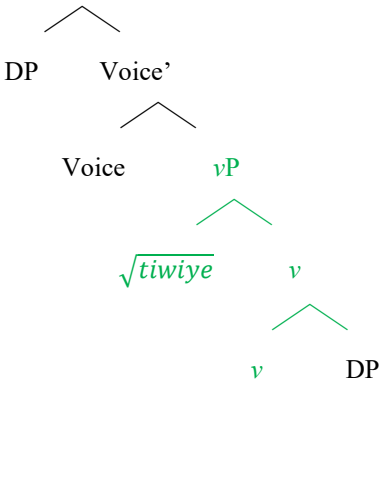
The results in Table 18 show that manner and result components are in complementary distribution.

	Manner	**Causative**
Restrictions on instrumental modifiers	Yes	No
Combinatorial on internal arguments	Yes	No
Object deletion and PNI	Yes	No
Independent use	Yes	No
Position in Type-A-RSVCs	V1	V2

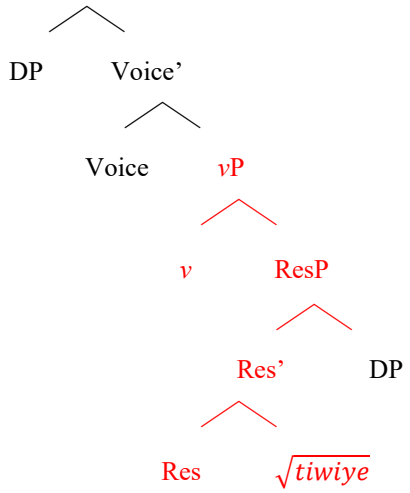
Table 18: Manner/result diagnostics of roots that participate in the manner/result ambiguity in Daakaka.

As shown in section 2.2.3, similar observations have been made for English verbs like *cut* which can either denote manner or result, but cannot denote both simultaneously (Levin & Rappaport Hovav 2013). Therefore, Daakaka verbs are subject to manner/result ambiguity, which supports the hypothesis of manner/result complementarity. As the meaning of the root is determined by its structural position, ambiguous verb roots in Daakaka can appear as both as modifier or complements of *v* (Ausensi to appear, Embick 2009, also Folli & Harley 2019, Alexiadou & Lohndal 2011).

(494) a.



b.



Further support for this assumption comes from suppletive transitive marking in the context of ambiguous roots which give rise to quite complex patterns. Firstly, roots like $\sqrt{sengep}$ 'open' show overlapping realization in both transitive and intransitive contexts. The transitive variant *sengave* can instantiate both manner (proto-typical *opening*-attempt with hands) and causative predicates ('to open sth.'), whereas the intransitive variant *sengep* can be either an unergative or unaccusative predicate. In communication, the context usually determines the interpretation.

√OPEN	Manner	Result
Transitive	*sengave*	*sengave*
intransitive	*sengep*	*sengep*

Table 19: Suppletion paradigm of the root sengep *'open'.*

Secondly, roots like *tiwiye* 'break' are ambiguous in transitive contexts only, as (manner) unergatives and (result) unaccusatives are realized by distinct suppletive forms. Here, *setyup* expresses an unaccusative state of being broken, while *tiwir* denotes an unergative action.

√BREAK	Manner	Result
transitive	*tiwiye*	*tiwiye*
intransitive	*tiwir*	*setyup*

Table 20: Suppletion paradigm of the root tiwiye *'break'.*

Finally, in the paradigm of the verb *gae* 'clean, wipe' the causative form *guo-ne* is derived from the unergative form *guo*. This pattern indicates an ongoing change in the suppletive paradigm of the predicate. Note that the unaccusative form *guo* has been replaced by the suppletive form *mesaa*, which also derives the causative verb *mesaa-ne*. Synchronically,

guo-ne and *mesaa-ne* are in competition, with most speakers preferring *mesaa-ne*. However, in the closely related language Daakie, the cognate verb *gone* 'to clean' is still frequently found in the corpus (Krifka 2013).[108]

√WIPE/CLEAN	Manner	Result
transitive	*gae*	*guo-ne / mesaa-ane*
intransitive	*guo*	*mesaa*

Table 21: Suppletive paradigm of the root gae 'clean, wipe'.

To sum up, the case of manner/result ambiguity in Daakaka shows that causative forms of ambiguous verbs are subject to a serialization condition, in that they can only occur in Type-A-RSVCs. In addition, the suppletive paradigm of most ambiguous verbs provides further insight into the configurational position of the roots in the syntax.[109]

7.4.3 Causative verbs

In addition, Daakaka exhibits a group of causative verbs which cannot appear outside of Type-A-RSVCs, as might be expected from the findings above. This is shown in (495) where the causative verb *wa* 'split' requires serialization with a manner predicate like *ta* 'cut'.

(495) a. *Bong ma ta **wa** lee ente*
Bong REALcut.ITR split.TR tree DEM
Bong split the tree by cutting it.'

b. * *Bong ma **wa** lee ente*
Bong REALsplit.TR tree DEM
Intended: 'Bong split the tree by cutting it.'

A non-exhaustive list of causative verbs is given in (496) (see von Prince 2015).

[108] In the Daakaka corpus, *guo-ne* 'clean' also occurs independently outside of Type-A-RSVCs, in either the context of filtering kava or clearing the space by hand (von Prince 2013). Therefore, the manner verb *guo-ne* may mean 'cleaning by hand', which slightly differs from *gae* 'wipe'. Note also that the reduplicated form of *guo-ne* – *gu~kuo-ne* – 'clean' has developed into the manner adverbial particle *kukuone* 'well'. While most speakers are still aware of both forms, some speakers have lost this contrast in favor of the adverbial particle. This has been primarily observed with L2-speakers. Hence, the preference for *mesaa-ne* may be determined by the shift towards the adverbial use of *gu-kuone.*

[109] Again, there is some evident lexical variation with verbs like *maawane* 'spoil' that can occur as both the causative V2 in Type-A-RSVCs, and independently without notable difference in meaning (von Prince 2013). In Daakie, the cognate transitive verb *baabap-ne* 'spoil, destroy' is derived from the intransitive verb *baa* 'to fight' which also exists in Daakaka (Krifka 2013, 2017, von Prince 2017a). Therefore, it seems plausible that *maawane* is ambiguous between the transitive form of the manner verb *baa* 'fight' and the causative verb *maawane* 'spoil'. This hypothesis needs to be checked in future research.

(496) a. *wa* 'split, break (lengthwise)'
b. *kote* 'break (crosswise)'
c. *tae* 'pierce'
d. *veni* 'kill'
e. *wesa* 'clear, clean'
f. *kuwu* 'get sth out.'

Because of their bound nature, causative verbs are classified as so-called 'verbal suffixes' by von Prince (2015). As such, causative verbs could be interpreted as bound result-state denoting elements, like German particles, which denote the result state of an action but cannot be used attributively (Larsen 2014, Zeller 2001 and reference therein).

(497) a. *Peter schloss die Tür* ***auf***. GERMAN
Peter unlock.PST ART door open.PRTCL
'Peter unlock the door.'

b. * *die* ***aufe*** *Tür.*
ART open.PRTCL door
'The unlocked/open door.'

c. *die offene Tür.*
ART open.ADJ door
'The open door.'

Based on the general serialization condition on causative predicates, I argue that these elements are causative verbs. Additional support for this hypothesis comes from the morphosyntactic, distributional and diachronic facts, which I discuss in the following.

7.4.3.1 Reduplication

Initial evidence comes from morphosyntactic processes that are sensitive to lexical categories. In Daakaka, one such process is reduplication, which has been observed to be restricted to verbal elements only. As in Samoan, reduplication is used to indicate pluractionality or intensification. In contrast, nouns, adjectives and adverbs, as well as functional elements (such as the progressive marker *du* or the transitive marker -*ane*), do not reduplicate (von Prince 2015).

(498) a. *Ka-m du* ***yas~yas****-ane ok wotop!* PLURACTIONALITY
2DU-REAL PROG RED~steal-TR 1SG.POSS breadfruit
'You're stealing my breadfruits (several of them)!' (von Prince 2015: 80)

b. *Uli wee ente mwe **yas~yas** murswa.* INTENSIFICATION
skin.of fruit DEM REAL RED~be.strong a.little
'The skin of this fruit is a little tough! (von Prince 2015: 80)

As illustrated in (499), verbal suffixes behave like independent verbs, in that they can reduplicate independently of the co-occurring manner verb to indicate pluractionality or intensification.

(499) a. *Bong ma ta **wa~wa** lee.*
Bong REAL cut.ITR RED~split.TR tree
'Bong split the tree by cutting it.'

b. *Mwe tyo **ta~tae** nyoo ma mwelili.*
REAL rip RED~pierce 3PL REALsmall
'He pierced them into small pieces by ripping them.'

As reduplication is restricted to the verbs, the reduplication of bound causative elements provides strong evidence that they can be classified as verbs.

7.4.3.2 Distribution

Another argument comes from the observation that causative verbs are in complementary distribution with other causative predicates, such as ambiguous causative verbs or causatives derived from stative PC-verbs. A combination of two causative verbs is not grammatical in Daakaka, as shown by the examples below:

(500) a. **Bong ma ta **tiwir** / **tiwiye** **wa** lee ente.*
Bong REAL cut.ITR break.ITR break.TR split.TR tree DEM
'Bong split the tree by cutting it.'

b. **Bong ma ta **wa** **tiyiye** lee ente.*
Bong REAL cut.ITR split.TR break.TR tree DEM
'Bong split the tree by cutting it.'

(501) a. **Bong ma ta **mwelili(-ane)** **wa** lee ente.*
Bong REAL cut.ITR be.small(-TR) split.TR tree DEM
'Bong split the tree by cutting it.'

b. **Bong ma ta **wa** **mwelili-ane** lee ente.*
Bong REAL cut.ITR split.TR be.small-TR tree DEM
'Bong split the tree by cutting it.'

Significantly, this ungrammaticality is not determined by the transitivity of the combined causative predicates, as both transitive and intransitive forms are ungrammatical.

Furthermore, the ungrammaticality of constructions like that of (501) does not arise from a general restriction of result state modification. In (502), the unaccusative variant can further specify the result state of bound causative verbs by multiple-marking SVCs, which have been proposed to be TP-adjuncts (section 4.3; cf. von Prince 2011b, Cleary-Kemp 2015).

(502) a. *Bong ma ta **wa** lee ente **ma** **metuyp**.*
Bong REAL cut.ITR split.TR tree DEM REALbe.broken
'Bong split the tree through by cutting it.'

b. *Bong ma ta **wa** lee ente **ma** **mwelili**.*
Bong REAL cut.ITR split.TR tree DEM REALbe.small
'Bong split the tree into small pieces by cutting it.'

The complementary distribution of bound causative elements indicates that these elements should be classified as causative verbs, which appear in the same morphosyntactic slot as derived and ambiguous causative verbs. In general, the restriction of a single result state derives from the single path constraint (Goldberg 1991), which is reflected by a single morphosyntactic position for the result state in causative and resultative configurations (cf. section 2.2.4). However, a further specification of the result state is allowed via adverbial modification (cf. Kratzer 2005, Washio 1997).

7.4.3.3 Diachronic and cross-linguistic evidence

Further evidence comes from diachrony, as many bound causative elements are cognate with Proto-Oceanic/Proto-Northern/Central Vanuatu causatives but not with stative predicates. This is exemplified below for *wa* 'split', *kote* 'break (crosswise)' and *veni* 'kill'. If bound causative verbs were stative particles, a causative origin would be unexpected.

(503) a. Daakaka *wa* 'split, break' < PNCV **vora* 'split, break, divide' (Clark 2009: 226)

b. Daakaka *kote* 'break (crosswise) < PNCV **koto* '(cut) across, in two' (Clark 2009: 118)

c. Daakaka *veni* 'kill' < POc **punu* 'kill' (Crowley 2002: 96)

The observation that once independent causative verbs develop into bound causative predicates, whose distribution is restricted to RSVCs, has also been proposed for other

'Melanesian' languages (Bradshaw 1982). In Paamese, for example, the Proto-Oceanic causative predicate **punu* has developed into the bound causative verb **vinii.* As a result, it is not possible to express a *killing*-event without any information regarding the causing event (Crowley 2002).

(504) a. *Ni-sal* *vinii-n* *vuasi* PAAMESE
1SG.DIST-spear kill-OBJ pig
'I will spear the pig to death.'

b. * *Ni-vinni-n* *vuasi*
1SG.DIST-kill-OBJ pig
'I will kill the pig.' (Crowley 2002: 96)

Similar constraints have been described by Thieberger (2006) for Nafsan, by Margetts (2005, 1999) for Saliba/Logea or by Krauße et al. (2019) for Vurës (cf. section 4.2.4).

Moreover, in languages that productively derive stative/anticausative verbs from causative verbs by a reflex of the stative/anticausative prefix *mV-* (cf. section 5.4.2.1 on the Samoan de-agentivizing prefix *ma-*; Evans 2003), this process still applies to bound causative verbs. Therefore, causative verbs may be derived to independent (non-serialized) stative/anticausative verbs (Krauße et al. 2019, Crowley 2002).

(505)	**non-serialized verb form:**		**(obligatorily) serialized verb from:**		
a.	*ma-kookoa*	'soft and mushy'	*kookoa*	'soften'	PAAMESE
b.	*ma-koloko*	'(of food) sticky'	*lokolokoa*	'soften'	
c.	*ma-riduu*	'sunken'	*riduuni*	'push underwater'	
d.	*ma-lumulumu*	'flexible'	*lumulumu*	'folded'	(Crowley 2002: 100f.)

Although Daakaka has lost its ability to form anticausative predicates from causative verbs, the diachronic and cross-linguistic evidence from closely related languages tends to support the assumption that bound causative verbs still classify as verbal predicates

7.4.4 A serialization condition on causative predicates

This section reveals that lexical causative verbs in Daakaka are subject to a serialization condition, in that they combine with manner denoting predicates in Type-A-RSVCs.

(506) **Serialization condition on causatives (in Daakaka):**
If a verb denotes a causative event relation, it necessarily combines with a manner verb that modifies causing event.

This condition applies to derived causative verbs (e.g. *mwelili-ane* 'to make small'), for causative verbs from ambiguous roots (e.g. *tiwiye* 'break'), as well as for lexical causatives (e.g. *wa* 'split') that occur solely in Type-A-RSVCs. Interestingly, many 'Melanesian' languages appear to prefer verb serialization in the context of causative predication, as frequently noted in the literature (Kraußе et al. 2019, Gast et al. 2014, Næss 2012, Næss & Boerger 2008, Thieberger 2007, Crowley 2002, Margetts 1999, Bradshaw 1982 among others; cf. also section 4.2.4).[110]

7.5 Summary

To summarize, the investigation of the event and argument structure of Daakaka verbal predicates shows that their internal structure differs significantly from the other languages that have been discussed so far (i.e. English and Samoan). Firstly, Daakaka does not exhibit productive morphological causatives, such as Samoan *fa'a*-causatives. Instead, underived PC-verbs, but not PC-adjectives, can be used as causative predicates, combining with the transitive suffix *-ane*. Moreover, a class of roots, such as $\sqrt{tiwiye}$, are subject to manner/result ambiguity, in that they either denote the manner of action (without entailing a result state) or specify the result state in causative predicates (cf. *cut*-type roots in English). Crucially, in its result use, the manner component drops out, which supports the hypothesis of manner/result complementary. However, Daakaka causative predicates are subject to a serizalization condition. As a result, causative verbs occur solely in the context of Type-A-RSVCs, together with a manner denoting V1. Due to this serialization condition on causative predicates, lexical causatives, such as *wa*, do not appear outside of Type-A-RSVCs as independent verbs. This observation contrasts the pattern in many

[110] Under the assumption that anticausative predicates differ from causative predicates, primarily in the presence of an external argument, the generalization predicts that anticausatives are also subject to the serialization condition (Alexiadou et al. 2015, 2006, Schäfer 2008). In Daakaka, this is not borne out by the data, as anticausative Type-A-RSVCs are ungrammatical (see also section 8.2.1).

(i) * *Lee ente ma* ***ta setyup***.
tree DEM REALcut be.broken
Intended: 'The is broken by getting cut.'

However, simple anticausative predicates appear to be comparatively rare in Daakaka. Instead, stative predicates may be coerced into anticausatives by adverbials (e.g. *medó* 'slowly' as in (ii)a) or aspectual markers (e.g. the progressive aspect marker *bwe* in (ii)b), which refer to a dynamic event (Krajinovic 2020, Koontz-Garboden 2007a, also Matthewson et al. 2015).

(ii) a. *Beelem ente ma sengep* ***ma medó***
door DEM REALbe.open.ITR REALbe.slow
'The door opened slowly.'

b. *Kaingas* ***bwe*** *mese.*
Kaingas REAL.PROG be.sick
Kaingas got sick.' (von Prince 2013: 2406)

In contrast, change-of-location predicates such as *soar* 'arrive' or *bwis* 'pass, go under' do not seem to be subject to a serialization condition. However, as it has been argued that change-of-location and change-of-state predicates differ in terms of their syntactic configuration, this does not necessarily affect the generalization above (Alexiadou & Schäfer 2011).

languages, such as English or Samoan, in which resultative formation is optional in the context of causative predication (cf. section 3.3 for an overview).

Secondly, I have demonstrated that transitive manner verbs can appear in intransitive contexts, in which the internal argument is not syntactically projected. In this respect, Daakaka manner verbs differ from Samoan manner verbs, which have been shown to reject object deletion, partly determined by the presence of an underspecified result state in the event structure of causative manner verbs (cf. section 5.4.3). Consequently, Daakaka allows the argument role of internal arguments to be saturated at a semantic level via existential binding. Notably, the presence of a syntactically projected internal argument is indicated by transitive morphology, which I have argued to be the spell-out of a secondary nominal licensing feature on Voice.

Lastly, derivational morphology in the verbal domain is often suppletive in Daakaka. On the one hand, transitive morphology is commonly realized via root suppletion, i.e. transitive and unergative verb forms are realized by suppletive stems. On the other hand, the stative/causative alternation can also be suppletive, giving rise to a fairly complex pattern of suppletion in the context of manner/result ambiguity. However, many aspects of Daakaka morphosyntax call for further investigation, e.g. adverbial modification and clause structure, as Daakaka has been described only recently. In the next section, I turn to Daakaka Type-A-RSVCs, demonstrating how the properties of the verbal predicates account for the morphosyntactic and semantic properties of the resultative construction.

Chapter 8: Type-A-RSVCs in Daakaka

Building on the investigation of the event and argument structure of (simple) verbal predicates, this section takes a closer look at the morphosyntactic and semantic properties of Type-A-RSVCs in Daakaka. In contrast to Samoan Type-B-RSVCs, the causative V2 is realized by a lexical causative predicate, while (transitive) manner verbs obligatorily appear in their intransitive form in the initial position in Type-A-RSVCs (von Prince 2015).

(507) a. *Bong* *ma* ***ta*** ***mwelili-ane*** *lee* *ente.*
Bong REAL cut.ITR be.small-TR tree DEM
Lit: 'Bong made the tree (into) small pieces by cutting it.'

b. *Angela* *ma* ***tas*** ***tiwiye*** *etastas* *ente.*
Angela REAL sit.ITR break.TR bench DEM
'Angela broke the bench by sitting (on it).'

c. *Adam* *mwe* ***kyes*** ***wesa*** *tisot* *ente.*
Adam REAL cut.ITR clean.TR t-shirt DEM
'Adam cleaned the t-shirt by washing it.'

Morphosyntactic and semantic analysis reveals that Daakaka Type-A-RSVCs and Samoan Type-B-RSVCs share the same general underlying type of morphosyntactic composition, as in both constructions, the manner verbs is merged as a event-modifying adjunct to a causative *v*P. Therefore, also Daakaka Type-A-RSVCs and Samoan Type-B-RSVCs are instances of the means constructions. However, I demonstrate that Daakaka Type-A-RSVCs significantly differ from Samoan Type-B-RSVCs with regard to the morphosyntactic status of the internal argument of V1. While the internal argument of the V1 must be syntactically projected in Samoan, I demonstrate that the internal argument of Daakaka Type-A-RSVCs is only presented at the semantic level. As a result, the manner V1 merges as an argumentless *v*P to the causative verb. Based on the reduced and bound nature of the manner verb, I discuss Type-A-RSVCs in the context of light verb construction, suggesting that both types of complex predicate formantion are reflecting different types of morphosyntactic and semantic composition. Lastly, I propose that the serializing condition on causative verbs in Daakaka arises from a language-specific constraint on the existentially binding of event arguments.

After a brief overview of the status of Type-A-RSVCs and its relation to other resultative expressions in Daakaka (section 8.1), I focus on the morphosyntactic status of

the manner verb. By providing evidence from reduplication, the repetitive modification by *tetes* 'again', the suppletive transitive marking on the V2 and the semantic contribution of the V1, I show that the manner verb has the properties of a morphosyntactic adjunct (section 8.2). The application of the event semantic diagnostics, proposed by Zimmermann & Amaechi (2020), supports the intuition that the manner verb modifies the causing event, which is entailed in the causative V2. Based on these findings, I argue that the manner V1 merges as a *v*P-sized modifier to the causative *v*P (section 8.3) and discuss its relation to light verb constructions in other Oceanic languages, such as Numbami (section 8.4).

8.1 Status and competing constructions

As in many other 'Melanesian' languages, Type-A-RSVCs in Daakaka are commonly used and frequently produced in causatvive and resultative contexts (von Prince 2015, also Ridge 2019, Franjieh 2012 on other Ambrym languages, Meyerhoff 2001 on the Oceanic Creole Bislama, cf. Verkerk & Frostad 2013, Crowley 2002 for an overview; see section 4.2.1). Unlike the status of Type-B-RSVCs in Samoan, there is no indication that the construction becomes less productive. Instead, speakers productively create new combinations of manner and causative verbs, given the right semantic/pragmatic context (also Kraußе p.c. on Northern Vanuatu language Vurës). This intuition is supported by storyboard elicitation that I carried out during my first field trip, designed to target resultative constructions (Hopperdietzel 2020a). However, Type-A-RSVCs have not been consistently produced by every speaker in all target contexts. Therefore, the elicitation sessions revealed some alternative strategies for expressing resultative meaning. This is illustrated by the following example.

Figure 23 shows a picture which is part of a longer storyboard 'The broken tree' (Hopperdietzel 2020a: JPH1-042). The storyboard tells the story of two friends that are walking through the bush to get firewood for dinner preperations. They find a tree that is already broken and dry, and take the tree to the village where they cut it into small pieces. In the given context, the protagonist Adam uses an axe to split a piece of wood into smaller pieces that can be used to light a fire. The story was presented in Bislama with the sentence *Bong i katem splitem wud ia i smolsmol* (lit.: 'Bong cut-split the wood small').

Figure 23: Elicitation context taken from the storyboard 'The broken tree' (Hopperdietzel 2020a: JPH1-042).

In this context, three different resultative structures were used by the participants. The first is a Type-A-RSVC: The manner V1 appears in its intransitive form (*ta* 'cut'), while the derived causative V2 denotes the result state (*mwelili-ane* 'to make sth. (into) pieces').

(508) *Adam ma **ta** **mwelili-ane** lee ente.*
Adam REAL cut.ITR be.small-TR tree DEM
'Adam cut the tree into small pieces.' (Hopperdietzel 2020a: JPH1-010)

The second is a multiple marking SVC. The manner V1 appears in its transitive form together with the object, while the result state is denoted by a stative verb that is marked by a separate TMA in postverbal position (cf. section 4.3 on the status of multiple-marking SVCs in Daakaka).

(509) *Adam mwe **te** lee ente **ma** **mwelili**.*
Adam REAL cut.TR tree DEM REAL be.small
'Adam cut the tree into small pieces.' (Hopperdietzel 2020a: JPH1-029)

While these constructions seem to be interchangeable, containing no significant semantic differences, one speaker indicated that the multiple marking construction puts the focus on the actual result state more than Type-A-RSVCs – that is, it highlights that the result state is reached.

Moreover, both constructions can also be combined, especially when the multiple marking SVC (*ma mwelili* 'small') further specifies the result state denoted by the V2 of the Type-A-RSVC (*wa* 'split').

(510) *Adam ma **ta** **wa** lee ente **ma** **mwelili**.*
Adam REAL cut.ITR split.TR tree DEM REAL be.small
'Adam split the tree into small piece by cutting it.' (Hopperdietzel 2020a: JPH1-006)

In conclusion, Type-A-RSVCs are a common and productive phenomenon in Daakaka. Although there is some variation with multiple-marking SVCs, both structures seem to express a slightly different accentuation. These two options are not in competition, as they can be combined in more complex resultative structures.

8.2 On the morphosyntactic status of the manner verb

In chapter 7, I have demonstrated that causative verbs in Daakaka are subject to a serialization condition in that these predicates cannot appear as independent verbs but must form Type-A-RSVCs with a manner V1. In this section, I focus to the morphosyntactic status of the manner verb. Firstly, I present the more general morphosyntactic and semantic properties of Type-A-RSVCs, which show the expected distribution of unergative and transitive manner on the one hand and causative result verbs on the other hand. As in Samoan Type-B-RSVCs, the meaning of the manner verb is not affected in its function as the manner denoting V1 in Daakaka Type-A-RSVCs. However, both constructions can differ in terms of their argument structure. While in Samoan Type-B-RSVCs, the internal argument of the manner verb must be identical with the internal argument of the causative verb, this is not the case in Daakaka Type-A-RSVCs. Instead, the implicit argument of the manner verb can differ from the internal argument of the causative verb, though it cannot be overtly realized.

I, then, turn to the lexical status of the manner V1 and its morphosyntactic composition with the causative V2 in Daakaka Type-A-RSVCs. Building on evidence from stem reduplication, adverbial modification with the repetitive modifier *tetes* 'again' and the presence of suppletive transitive morphology on the causative verb, I argue that the manner V1 is a lexical verb that adjoins to the causative V2. Therefore, Daakaka Type-A- and Samoan Type-B-RSVCs share their underlying morphosyntactic type of composition.

8.2.1 Event and argument structure properties of Type-A-RSVCs

To start the investigation of Type-A-RSVCs in Daakaka, I first present their morphosyntactic and semantic features. Here, I primarily focus on the distribution of the verb classes according to their event structure, argument structure and transitivity marking. The analysis shows that Daakaka Type-A-RSVCs exhibit the expected distribution of manner verbs and causative result verbs. As in Samoan Type-B-RSVCs, both transitive and unergative verbs can appear in the V1 position of Type-A-RSVCs. However, Daakaka Type-

A-RSVCs differ from Type-B-RSVCs in Samoan, as the the implicit internal argument of the manner V1 can be interpreted to be distinct from the overtly realized internal argument of the construction. With a focus on the meaning of the manner verb, its semantics are not affected by its occurrence within Type-A-RSVCs.

8.2.1.1 The distribution of verbal predicates

Prototypically, two transitive verbs combine in Daakaka Type-A-RSVCs, with the V1 denoting the manner of an action that causes the result state specified by the causative V2. However, the manner V1 appears in its intransitive, unergative verb form without (suppletive) transitive morphology, if an intransitive form is available. Instead, transitivity is solely marked on the causative V2. In (511)a, for example, the transitive manner verb *towaase* 'sweep' appears as intransitive *tewes* 'sweep' in combination with the result verb *gu~kuo-ne* 'to clean' in a Type-A-RSVC.

(511) a. *Bong mwe **tewes** **guo-kuo-ne** tan ente.* TRANSITIVE + TRANSITIVE
Bong REAL sweep.ITR RED~clear.TR ground DEM
'Bong cleaned the floor by sweeping.'

b. *Ye-m **tyo** **ku~kuwu** bwee vini-sye nyoo.*
3PL-REAL rip.ITR RED~out.TR shell.of husk.of-3SG.POSS 3PL
'They tore the husks from the coconut shell.' (von Prince 2015: 84)

Combinations of two transitive verbs are very productive and frequently occur across semantic domains that usually involve change-of-state semantics, as, for example, *cut-&-break*-events, washing/cleaning, opening/closing, killing. This pattern has been described for other languages in the area (cf. overview in section 4.2.1).

(512) a. *Angela mwe **tyo** **ta~tae** nyoo ma mwelili.*
Angela REAL rip.ITR RED~pierce-TR 3PL REAL be.small
'Angela pierced them [coconut leaves] small by ripping.'

b. *Bong mwe **guo** **tiwiye** toeletpepa.*
Bong REAL wipe.ITR break.TR toilet paper
'Bong broke the toilet paper by wiping.'

c. *Bong mwe **sear** **maawa-ne** rapa.*
Bong REAL wear.ITR spoil-TR shoes
'Bong spoiled the shoes by wearing.'

In addition to transitive verbs, unergative verbs can be found in the V1 slot, such as *tas* 'sit' or *saa* 'hang' (von Prince 2015). The example in (513) shows that *tas* 'sit' is an unergative verb which denotes an action of sitting (down). The location or goal (here: *etastas* 'bench') is introduced by the preposition *yan*, and not by the transitive suffix *-ane*.

(513) *Bong ma tas *(yan) etastas.*
Bong REAL sit on bench
'Bong sat (down) on a bench.'

In a Type-A-RSVC, unergative *tas* 'sit' expresses the manner of the causing event. This is shown in the examples in (514) where *sitting (down)* denotes the manner of the action with which the agent breaks or cleans the bench.

(514) a. *Bong ma* ***tas tiwiye*** *etastas.* UNERGATIVE + TRANSITIVE
Bong REAL sit break bench
'Bong broke the bench by sitting (down).'

b. *Bong ma* ***tas guo-kuone*** *etastas.*
Bong REAL sit RED~clean bench
'Bong cleaned the bench by sitting (down).' (e.g. in a context where there is some machine oil on the chair and a person sits down on the chair and cleans it with his/her trousers).

Unlike Samoan, the V1 position can be filled by more than a single manner verb, as long both verbs can be understood to jointly describe an action.

(515) *Mwe* ***doko sengep tiwiye*** *beleem.*
REAL pull.ITR open.action.ITR break.TR door
'S/he broke the door by pulling it (open) with his/her hands.'

In contrast, manner verbs cannot function as the result denoting V2 in Type-A-RSVCs. This is illustrated by the examples in (516).

(516) a. # *Bong mwe* ***syep te*** *pwesye*
Bong REAL slice cut.TR branch
'Bong cut the branch by slicing it.'

b. # *Angela mwe* **guo kase** *tisot ente.*
Angela REAL wipe.ITR wash.TR T-shirt DEM
'Angela washed the T-shirt by rubbing it'

Instead, the V2 position is restricted to the class of causative result verbs which have been identified in section 7.4.3. As expected, causative verbs cannot function as the V1 in Type-A-RSVCS.

In general, only verbs that denote an action event can enter Type-A-RSVCs: Unaccusative predicates are ungrammatical in both positions. The example in (517)a also indicates that Daakaka does not exhibit Type-C-RSVCs (cf. section 4.2.3).

(517) a. * *Bong ma/mwe **ta/ te** setyup lee ente.* TRANSITIVE - UNACCUSATIVE
Bong REAL cut.ITR cut.TR be.broken tree DEM
Intended: Lit.: 'Bong cut the tree broken.'

b. * Bong *ma **yas** tiwiye lee ente.* UNACCUSATIVE - TRANSITIVE
Bong REALbe.strong break.TR tree DEM
Intended: 'Bong broke the tree because he is strong.'
(i.e. his strength causes the breaking)

With respect to argument structure, Type-A-RSVCs are always transitive as anticausative RSVCs are ungrammatical in Daakaka, as shown in (518). This observation is independent of the presence of transitive morphology on the causative verb. Instead, the sentence is only felicitous under a subject drop reading with an additional topicalization of the object to the clause initial position.

(518) a. # *Lee ente ma **ta setyup/ tiwiye.***
tree DEM REALcut.ITR break.ITR break.TR
Intended: 'The tree broke from the cutting.'
Instead: 'The tree, someone broke it by cutting.'

b. # *Tan ente ma **tewes gu~kuo(-ne).***
floor DEM REALsweep.ITR RED~clean-TR
Intended: 'The floor became clean from the wiping.'
Instead: 'The floor, someone cleaned it by wiping it.'

To summarize, Daakaka Type-A-RSVCs show the expected distribution of manner and causative verbs. By contrast with Samoan, unergative verbs can be productively used as the manner V1, without affecting the grammaticality of the construction. This is especially true, since even the transitive manner verb appears in its intransitive form, when used as the V1. Instead, the transitive morphology only appears on the causative V2.

8.2.1.2 Argument structure and the semantic contribution of the manner verb

In terms of argument structure, the last section has already indicated that the external argument cannot be deleted, as Type-A-RSVCs cannot form anticausative variants. Moreover, causer external arguments are restricted to constructions, in which the non-volitional argument is compatible with the (causative) manner verb, when used as an independent verb. Therefore, the presence of the causative verb does not affect the combinatorial properties of the manner verb. Note that *te* 'cut' appears to entail a result state in the context of a (non-)volitional causer (see FN107).

(519) a. *Byata / #Eng ma **te** lee ente.*
lightning wind REAL cut.ITR tree DEM
'The lightning/# The wind cut the tree.'

b. *Byata / #Eng ma **ta** **tiwiye** lee ente.*
lightning wind REAL cut.ITR break.TR tree DEM
'The lightning/# The wind broke the tree by cutting it.'

In contrast to Samoan Type-B-RSVCs, the (implicit) internal argument of the manner V1 in Daakaka Type-A-RSVCs can differ from the overtly realized internal argument of the causative V2. In (520)a, the implicit argument of the manner verb *ta* is something object that blocks the road, for example, overgrown grass or branches of a tree that are hanging across the road. Not the road itself is cut. Likewise in (520)b, it is not the ground that is burnt but the something that lies on the ground (cf. Malau 2016 on Vurës, Margetts 2005 on Saliba/Logea, see also Tomioka 2006 on Japanese RSVCs).

(520) a. *Bong ma **ta** **sengave** seli.*
Bong REAL cut.ITR open.TR road
'Bong opened/cleared the road by cutting [the grass].'

b. *Bong mwe **penin** **wesa**.*
Bong REAL burn.ITR clean
'Bong cleaned [the place] by burning [the rubbish].'

However, it is not possible to overtly realize the internal argument of manner V1.

(521) a. *# Bong ma **ta** **pwesye** **sengave** seli.*
Bong REAL cut.ITR branch open.TR road
'Bong opened/cleared the road by cutting (the) branches.'

b. # *Bong mwe* ***penin syuksyuk wesa*** *tan.*
Bong REAL burn.ITR rubbish clean ground
'Bong cleaned the place by burning rubbish.'

The interpretation of the implicit argument is restricted to potential intermediate instruments but excludes intermediate causer or agents, which shows that Type-A-RSVCs express a direct relation between the causing event and the result state (see section 3.1.2; Levin 2020, Kratzer 2005, Wolff 2003, Tomioka 2006 on Japanese RSVCs). Therefore, the implicit argument of *ta* 'cut' cannot be interpreted as distinct from the door. Therefore, the sentence is infelicitous in a context, in which Bong cuts a tree that falls against the door, so that the door breaks.

(522) *Bong ma ta tiwiye beleem ente.*
Bong REAL cut.ITR break.TR door DEM
'Bong broke the door by cutting it.'

In such contexts, the V1 determines the choice of internal arguments for the whole construction. As noted in section 7.4.2.2, *tiwiye* 'break.action' in its manner use can combine with *pwesye* 'branches', but not with *lee* 'tree, wood'. The example in (523) shows that this restriction holds true for Type-A-RSVCs.

(523) *Bong ma tiwir tiwiye pwesye / # lee.*
Bong REAL break.action.ITR break.TR branch tree
'Bong broke the branches # the trees by breaking them with his hands.'

This observation relates to the observation that manner verbs maintain their full lexical meaning in Type-A-RSVCs and are not semantically bleached. This can be illustrated by the range of verbs which, for example, combine with the causative verb *wesa* 'clean, clear'. All of these verbs denote a very specific cleaning action.

(524) a. *kyes wesa* 'clean by washing' → using water
b. *guo wesa* 'clean by wiping' → performing a wiping action, with a hand or cloth
c. *tewes wesa* 'clean by sweeping' → using a broom
d. *penin wesa* 'clean by burning' → using fire
e. *tas wesa* 'clean by sitting down'
f. *ta wesa* 'clean by cutting' → using a knife

Table 22 summarizes the event and argument structure of Type-A-RSVCs in Daakaka. These results indicate that although Daakaka Type-A-RSVCs and Samoan Type-B-

RSVCs share several morphosyntactic and semantic properties, they are subject to variation with respect to the interpretation of the internal argument of the manner verb.

	V1	V2
Verb class	manner (itr./tr.)	causative (tr.)
Internal argument	implicit	yes
Semantic bleaching	no	no

Table 22: Morphosyntactic and semantic properties of Type-A-RSVCs.

8.2.2 Manner verbs as syntactic adjuncts

This section deals with the morphosyntactic composition of the two verbs in Type-A-RSVCs. Evidence for this analysis comes from reduplication, the narrow scope of the repetitive modifier *tetes* 'again' and suppletive transitive morphology on the causative V2 only. The findings demonstrate the lexical status of the V1, which is adjoined to the causative V2. As a result, Type-A-RSVCs in Daakaka has the same type of morphosyntactic composition as Samoan Type-B-RSVCs, despite the morphologically reduced nature of the manner V1 (see section 6.3).

8.2.2.1 Reduplication

Firstly, evidence from reduplication suggests that the initial verb is not a causative light verb, i.e. the spell-out of *v* in causative configurations, i.e. a spell-out of event introducing *v* head in causative configurations (compare e.g. section 2.4 on periphrastic causatives and section 5.3 on fa'a-causatives; cf. Wood 2011, Aboh 2009, Folli et al. 2005). As previously mentioned in section 7.4.3.1, reduplication in Daakaka is limited to lexical verbs, whereas functional verbs, such as auxiliaries, are not subject to this morphosyntactic process.

In general, Daakaka exhibits a small set of verbs which can appear as both lexical verbs and auxiliaries. One of these verbs is *pwe(r).* As a lexical verb, *pwe(r)* means 'stay', whereas as an auxiliary encodes progressive aspect. Such patterns have been frequently observed in various languages (Heine & Kuteva 2002, Comrie 1976, also von Prince et al. 2019 for a 'Melanesian' perspective). The lexical usage is given in (525):

(525) *Steven mwe* ***pwer*** *taur.*
Steven REAL stay somewhere
'Steven may stay somewhere.' (von Prince 2015: 145)

In its aspectual use, *pwe* occurs in between the mood marker and the verb, is often phonetically reduced, and clitized to the positive realis marker *mwe* to the portmanteau *bwe* (von Prince 2015).

(526) a. *Ka we* ***pwe*** *bun te ka ko-p pakuon téé-ane ka ko w=esi.*
SUBJ POT PROG coo CONJ ASR 2SG-POT work.hard look-TR ASR 2SG POT-see
'If it coos somewhere, you will have a hard time looking for it.' (von Prince 2015: 87)

b. *S-am sini ye wep kyun* ***bwe*** *syute ngok.*
CL3-2SG.POSS thorn.of leave.of pandanus just REAL.PROG hit 2SG
'Only the tips of your pandanus leaves are pricking you.' (von Prince 2015: 87)

In terms of reduplication, an examination of corpus data provided by von Prince (2013) shows that lexical *pwer* 'stay' can be reduplicated, primarily to express habituality (von Prince et al. 2019).

(527) *Tabalir mwe* ***pwer~pwer*** *yan tan kyun.*
woodborer REAL RED~stay on ground just
'The woodborer just lives on the ground.'

In contrast, there is not a single example of reduplication of the progressive *pwe* (0 of 605 entries), or any other auxiliary. This observation suggests that morphosyntactically ambiguous verbs, such as *pwe*, reduplicate only in its lexical, but not in its functional use. [111]

Turning to the initial predicate of Type-A-RSVCs, the manner V1 can be reduplicated independently from the causative V2. Here, the reduplication expresses the plurality of the causing action.

(528) a. *Ma* ***ti~tiwir*** ***wa*** *pyeswe.*
REAL RED~apply.force.ITR split.TR branch
'S/he broke the branch by breaking it with his/her hands several times.'

[111] Butt & Geuder (2001) observe for Hindi/Urdu that light verbs pattern with lexical verbs in allowing reduplication, whereas auxiliaries do not. In Daakaka, the verb *gene* 'do' and *me* 'come' seem to qualify as light verbs in causative (i)a and inchoative constructions (i)b. In their functional use, *gene* 'make, cause' embeds a subordinated clause, and *me* 'become' takes verbal, nominal or adjectival complements (von Prince 2015).

(i) a. *Mwe pwer tevy-an nat-en nyoo mwe* ***gene*** *[ya-m pyang~pyang ...]*
REAL stay side.of-3SG.POSS child-3SG.POSS PL REAL make 3PL-REAL RED~warm
'She stays with her children so they are warm.' (von Prince 2015: 375)

b. *Barar ente* ***mwe*** *me i towo.*
pig DEM REAL become COP big
'The pig grew big.' (von Prince 2015: 356)

In the corpus (von Prince 2013), reduplicated forms of *gene* and *me* solely appear in its lexical, but not in its functional/light verb use. This suggests that the observation for Hindi/Urdu does not hold for Daakaka and supports the generalization that only lexical verbs can reduplicate.

b. *Ma* ***do~roko*** ***sengave*** *beleem.*
REAL RED~pull.TR open.TR door
'S/he opened the door by pulling it several times.'

Therefore, the examples in (528) show that the manner V1 in Daakaka Type-A-RSVCs is not a functional verb, as it patterns with lexical verbs and not with other auxiliaries, with regards to reduplication.

Furthermore, the observation that both manner V1 and causative V2 can reduplicate independently from each other also indicates that the two roots are not merged to a single *v* head. Assuming that pluractional semantics are located on *v* (see section 6.3.1.1; cf. Haji-Abdolhosseini et al. 2002), it is expected that both roots reduplicate simultaneously, or as a single unit, if both roots merge to a single *v* head. However, this is not borne out by the data, as both verbs can reduplicate independently from each others.

(529) a. *Ma* ***tiwir*** ***wo~wa*** *pyeswe nyoo ente.*
REAL apply.force RED~split branch 3PL DEM
'S/he broke the branches by breaking them with his/her hands.'

b. *Ma* ***ti~tiwir*** ***wo~wa*** *pyeswe nyoo ente.*
REAL apply.force RED~split branch 3PL DEM
'S/he broke the branches by breaking them with his/her hands several times.'

Crucially, the respective reduplication of V1 and/or V2 realizes slightly different flavors of pluractionality. While the reduplication of the manner V1 highlights that the agent performs the causing action repeatedly, the reduplication of the causative V2 primarily stresses the plurality of the object argument. Consequently, the (independent) reduplication of the manner V1 indicates that the V1 merges as an (independent) lexical verb with the causative V2 in Daakaka Type-A-RSVCs.

8.2.2.2 Narrow scope of tetes *'again'*

The following two sections demonstrate that the two verbs of Type-A-RSVCs are combined via adjunction. The first piece of evidence comes from the application of the 'again'-test to Type-A-RSVCs. The result shows that *tetes* 'again' licenses a narrow repetitive reading that solely presupposes the action event encoded by the V1 (cf. chapter 3). Below, I examine the different readings of *tetes* in the context of Type-A-RSVCs. [112]

[112] Note that Daakaka exhibits three different repetitive modifiers, namely *tetes, mon* and the repetitive suffix *-tase*, which can co-occur to intensify the repetitive reading (von Prince 2015). To investigate the

First, *tetes* 'again' can license a restitutive reading, by taking only the result state in its scope. This is demonstrated in (530), where the truck was in a clean state before but was swept for the first time. In this context, *tetes* indicates the restitution of the result state by the action performed by the agent.

(530) Yesterday morning, Bong bought a new truck from the shop. The truck was perfectly clean. In the afternoon, he drove to the gardens to get some firewood. He loaded the truck with some wood and drove back home. After he unloaded the truck, he realized that the truck got very dirty. Therefore, he took a broom and swept the truck clean again.

Bong	*mwe*	*tewes*	*gu~kuo-ne*	*trak*	***tetes***.	RESTITUTIVE
Bong	REAL	sweep	RED~clean-TR	truck	again	

'Bong swept the truck clean again.'

Under a configurational analysis of 'again', the availability of a restitutive reading of *tetes* indicates that it can attach to the ResP. Therefore, only the result state is part of the pre-supposition introduced by *tetes* (see section 6.3.2.1; Lechner et al. 2015, Beck & Snyder 2001b, von Stechow 1996, etc.).

(531) a. ⟦tetes⟧(ResP) = again (λs. clean(s) ∧ Holder(table, s))

b. Presupposition: ∃s'. s'<s ∧ clean (s') ∧ Holder(table, s')

event structure of Type-A-RSVCs, I focused on *tetes*, as it potentially belongs to the same class of repetitive modifiers as English *again* and Samoan *toe*, combing with verbal predicates only. In contrast, *mon* can also be used on nouns to convey a meaning of 'another *x*' (but see Spathas & Michelioudakis 2020 on additive modifiers as a potential diagnostic for event structure).

(i) a. *Mu kueli vyan te baséé mwe yung* ***mon*** *pwer.* NOMINAL
REALreturn go CONJ bird REAL quite also stay
'He went back and the bird was silent again.' (von Prince 2015: 219)

b. *Yap myató ente* ***mon*** *ma dam-ane buo swa.* VERBAL
old.man old DEM also REALagree-TR boar one
'This old man also agreed to give him a boar.' (von Prince 2015: 218)

Furthermore, *-tase* attaches to the verb as a suffix. Due to the lack of data, it is not clear whether *-tase* may be directly merged to the verbal head or may be an instance of adverb incorporation (see Lechner et al. 2015 for an overview and discussion, cf. also Alexiadou 1997, Rivero 1992).

(ii) *Temeli vyaven nya ente ye-m us-****tase*** *ka.*
child woman 3DU DEM 3DU-REAL ask-redo say
'The two girls asked again.' (von Prince 2015: 72)

As *tetes* licenses both repetitive and resultative readings, I excluded both *mon* and *-tase* from the present study. However, as all repetitive modifiers can co-occur in the same clause, the syntactic and semantic status of the respective modifiers, and in particular, their combinations, calls for future investigation.

(iii) a. *Puskat mwe myan* ***tetes*** ***mon***.
cat REAL laugh again also
'The cat laughed again.' (von Prince 2015: 219)

b. *Mwe ves-****tase*** *beke-sye lemuo swa* ***tetes***.
REAL kick-redo twig-3SG.POSS cycad one again
'He kicked another branch of the cycad (again).' (von Prince 2015: 222)

In addition, *tetes* also licenses a repetitive reading that takes in its scope both the causing action denoted by the V1 and the result state denoted by the V2. This is shown in (532) where *tetes* scopes over the whole RSVC.

(532) Yesterday, Bong sat down on his old bench which broke under his weight. Therefore, he fixed the bench quickly. After work, Bong sat down on the fixed bench to have a rest. Unfortunately, the bench broke under his weight again.

Bong ma tas tiwiye etastas ***tetes****.* REPETITIVE (WIDE)
Bong REAL sit break bench again
'Bong broke the bench again by sitting on it.'

This suggests that *tetes* can also attach to the VoiceP. Here, it presupposes that the agent has performed the action, including the caused result state before.

(533) a. ⟦again⟧(VoiceP) = again (λe.∃s. Ag(Peter, e) ∧ sit(e) ∧ Caus(e,s) ∧ broken(s) ∧ Holder(bench, s')

b. Presupposition: ∃e'.∃s'. e'<e ∧ Ag (Peter, e') ∧ sit(e') ∧ Caus(e',s') ∧ broken(s) ∧ Holder(bench, s')

Again, the argument for an adjoined structure is that *tetes* can be used in contexts in which only the causing action is repeated. In (534), the context rules out a repetitive reading that includes the result state or even change-of-state. In the first event, Bong sat down on the chair which did not affect the chair at all. Only after he sat down on the chair again, the chair broke.[113]

(534) Bong is a huge man. Yesterday, he was working the whole day in the gardens. In the evening, he came back from work and sat down on his new chair in front of his house. After a while, he stood up and went inside to have dinner with his family. After dinner, he went back outside and sat down on the chair again. This time, the chair broke under his weight.

Bong ma tas tiwiye etastas ***tetes*** *(mon).* REPETITIVE (NARROW)
Bong REALsit break.TR chair again again
'Bong broke the chair by sitting (on it) again.'

Therefore, only the causing event is presupposed by *tetes*, which suggests that *tetes* can scope over the V1 independently.

[113] Two speakers note that in combination with *mon* 'also', the narrow repetitive reading of *tetes* becomes more explicit. However, its presence does not seem to be necessary for the felicity of the example in (535). In fact, the repetitive modifier *mon* and *tetes* often co-occur and some speakers also produce this combination in restitutive and repetitive contexts (cf. FN112).

(535) a. ⟦again⟧(v_1P) = again (λe. sit(e))
b. Presupposition: ∃e'. e'<e ∧ sit(e')

As discussed in detail in section 6.3.2.1, a narrow repetitive reading of 'again' is only compatible in the case that the manner V1 is adjoined to the causative V2. Consequently, the presence of such a reading is an argument against a complementation or light verb analysis.[114]

8.2.2.3 Transitive morphology on V2

Another argument for adjunction comes from transitive morphology. As described in section 7.3, most manner verbs in Daakaka indicate their transitivity with either an allomorph of the transitive marker *-ane* or with root-suppletion (section 7.3; von Prince 2015). In Type-A-RSVCs, the transitivity is marked just once for the whole construction on the causative V2.

(536) a. *Bong ma* ***ta*** ***mwelili-ane*** *lee ente.* INTR-TR
Bong REAL cut.INTR be.small-TR tree DEM
'Bong cut the tree into small pieces.' / 'Bong broke the tree by cutting it.'

b. *Bong ma* ***ta*** ***tiwiye*** *lee ente.*
Bong REAL cut.INTR break.TR tree DEM
'Bong cut the tree into small pieces.' / 'Bong broke the tree by cutting it.'

However, transitive marking on the manner V1 alone, or on both verbs simultaneously, is ungrammatical. This is shown by the suppletive transitive form of the manner verb *te* 'cut' (537), and the suppletive (stative) unaccusative form of the causative verb *tiwiye* 'break', which is *setyup* 'be.broken' (538) (see section 7.4.2.4).

(537) a. * *Bong mwe* ***te*** ***mwelili-ane*** *lee ente.* *TR-TR
Bong REAL cut.TR be.small-TR break.TR tree DEM

b. * *Bong mwe* ***te*** ***tiwiye*** *lee ente.*
Bong REAL cut.TR break.TR break.TR tree DEM

[114] The fact that *tetes* always occurs in a clause final position raises the question of whether a structural analysis of *tetes* is adequate, as in many languages the different readings of 'again' are determined by the relative position of the repetitive modifier in the clause (Lechner et al. 2015, Beck 2005, von Stechow 1996 etc.). As briefly mentioned in section 7.2.3, the exact clausal position of the verb in Daakaka is unclear yet. If Daakaka exhibts the kind of VP-movement, as observed in other Oceanic SVO languages of this area, Daakaka may by subject to verb-final adverb (van Urk 2019a, Roversi 2019, Pearce 2015). Then, *tetes* would remain in its base generated position and is spelled-out in clause final position. Again, the verification of this hypothesis requires a careful examination of adverbial scope dependencies, which is beyond the scope of this thesis.

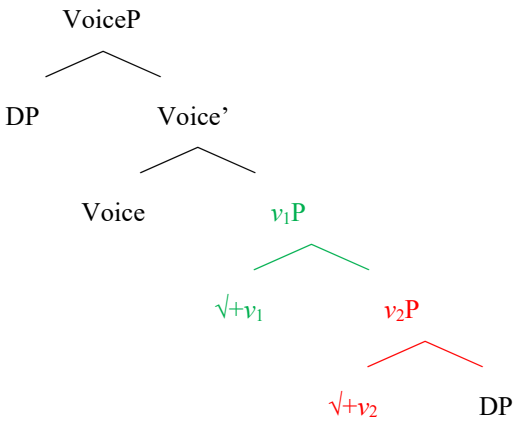
(538) a. * *Bong mwe* ***te*** ***mwelili*** *lee ente.* *TR-INTR
Bong REAL cut.TR be.small.ITR tree DEM

b . * *Bong mwe* ***te*** ***setyup*** *lee ente.*
Bong REAL cut.TR be.broken.ITR tree DEM

In section 7.3, I demonstrated that transitive morphology is best analyzed as the spell-out of the secondary licensing feature on Voice in transitive configurations. By assuming that both verbs are merged under a single Voice head (see section 8.3.3 for argument in this direction), the question arises as to how Voice morphology appears on the V2. In the following, I show that a complementation analysis appears to violate various locality constraints on suppletion (Choi & Harley 2019, Harley et al. 2017, Moskal 2015, Bobaljik 2012, Embick 2010, cf. also Merchant 2015, Svenonius 2012).

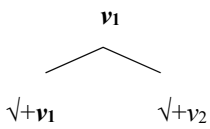
Firstly, under the hypothesis that the two verbs are combined via complementation, in which the manner V1 takes the causative V2 as a complement. This is shown in (539).

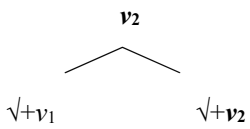
(539)



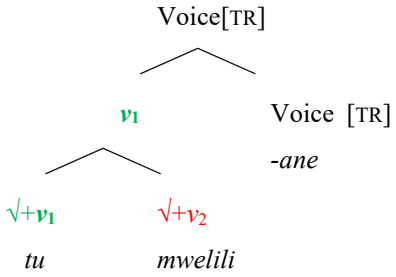
In this configuration, the manner v_1 intervenes in between the causative v_2 and the Voice. To derive transitive marking on the lower verb, one could assume head movement of the lower v_2 head to Voice head. However, as another v_1 is structurally closer to Voice, v_2 needs to move via v_1, as it cannot be targeted by Voice directly. Therefore, v_2 would incorporate into v_1 resulting in a complex head that is similar to noun-incorporation. In this structure, v_1 still projects, while v_2 is adjoined to v_1. The complex v head is shown in (540), in which I assume that v_2 adjoins to the right of v_1 to satisfy the surface word order. Note that it is not possible for the v_2 to be the head of the construction, as this configuration would violate the mirror principle (Harley 2013, Baker 1985).[115]

[115] Note that right adjunction in head movement is not possible in strict antisymmetric approaches (Kayne 1994). Following this view, a head movement approach on Type-A-RSVCs would be ruled out immediately. To account for M-R word order in Type-A-RSVCs, one would have to adopt an account in which the linearization of head movement is parametrized for each head whether (e.g. Harley 2013, 2010).

(540) a. 

b. * 

This complex v_1-v_2 head would move further to Voice. Given the surface order of the transitive suffix appearing at the right edge of the compound, the complex head would need to be left adjoined.

(541) 

In principle, the configuration in (541) could account for structures that do not involve root suppletion. This is shown in (542), where both *tu* 'hit' and *mwelili-ane* 'to put into pieces' are not subject to Voice-sensitive root suppletion.

(542) *Mu tu mwelili-ane.*
REAL hit be.small-TR
'S/he hit it into pieces.'

However, the structure in (541) cannot account for the root suppletion facts in Type-A-RSVCs, as root suppletion of the lower V2 violates the various locality conditions on root suppletion discussed in the literature.

Firstly, if structural adjacency is the restrictor for root suppletion, as proposed by Bobaljik (2012), the intervening intransitive v_1 would be expected to block Voice-driven root suppletion on its v_2 complement. Note, however, that structural adjacency already rules out Voice-driven root suppletion more generally as the verbalizer *v* intervenes in between Voice and the root (see section 7.3).

(543) [[√+v_1 [√+v_2]] Voice [TR]]
'----✗---'

Secondly, although Embick's (2010) proposal of linear adjacency as a requirement on root suppletion seems promising since the suppletive root and the Voice are concatenated during spell-out, see the structure in (547) below, there are two concerns with the proposed locality conditions in (544) and (545), adapted from Ostrove (2016) .

(544) **Spell-Out Domain**
In order for a node A to trigger allomorphy of a node B, A and B must be within the same spell-out domain.

(545) **Linear Adjacency**
In order for a node A to trigger allomorphy on a node B, A and B must be linearly adjacent (concatenated).

On the one hand, it is not entirely clear how the spell-out domain of the embedded v_2 would be defined. Under the original approach, the intervening v_1 is expected to act as a cyclic head introducing a separate spell-out domain that disconnects Voice and v_2. Consequently, Voice-driven suppletive morphology on V2 would violate the first locality condition on root suppletion. On the other hand, even under a less restrictive view that the whole Voice domain is the relevant spell-out domain (e.g. Tucker 2015), i.e. including both v_1 and v_2, the interaction of reduplication and suppletion questions the condition of linear adjacency on root suppletion in Daakaka Type-A-RSVCs. As shown in section 8.2.2.1., CV-reduplication can target the V2 independently to express pluractional semantics. Crucially, the reduplicated syllable appears in the Voice-conditioned suppletive form *ti~* and not in the unconditioned form *se~* (from *setyup* 'break.ITR'; see section 7.4.3.1).

(546) a. *Bong ma ta ti~tiwiye lee ente.*
Bong REAL cut.ITR RED~break.TR tree DEM
'Bong broke the tree by cutting them.'

b. * *Bong ma ta se~tiwiye lee ente.*
Bong REAL cut.ITR RED~break.TR tree DEM
'Bong broke the tree by cutting them.'

By treating reduplicative morphology as the root-conditioned spell-out of *v,* suppletive morphology on v_2 is not expected since v_2 and Voice are not linear adjacent.[116]

(547) $v_1 \frown \sqrt{}_1 \frown v_2 \frown \sqrt{}_2 \frown$ Voice[TR]
'---✗---'

Lastly, even under a more flexible account on allomorphic conditioning allowing root suppletion to take place on any head in a given domain (here: Voice; Choi & Harley 2019,

[116] The interaction between reduplication and root suppletion, which is not governed by phonological principles (e.g. Paschen 2018), requires additional research regarding the relative order in which the morphological rules apply at PF (cf. Haugen 2016, see Inkelas & Zoll 2006 for an overview).

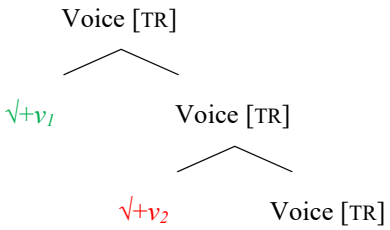
Merchant 2015; also Moskal 2015), Voice is expected to trigger root suppletion on V1 and V2 simultaneously, as both verbs are sensitive to the presence of the Voice head.

(548) [[√+v_1 [√+v_2]] Voice [TR]]

Consequently, as the V1 does not show root suppletion in Type-A-RSVCs, head movement/incorporation cannot account for the suppletion pattern in this construction. Note that the same argument holds true for a light verb analysis, as the overtly realized V1 would block suppletive morphology on the embedded causative V2.

An alternative has been offered by Collins (2002). He suggests that RSVCs with causative V2s are derived from multiple verb movement to Voice. In his account of ǂHoan RSVCs, both v_1 and v_2 separately move to Voice, adopting an analysis on multiple wh-movement in Bulgarian. This mechanism produces a complex Voice head in which both v_1 and v_2 are directly attached to Voice.

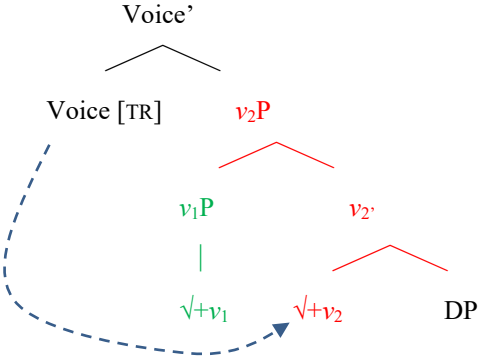
(549)



Yet, this configuration overgenerates root suppletion, within Type-A-RSVCs in Daakaka. As both v_1 and v_2 are directly merged to Voice, root suppletion is expected to occur on both verbs. Consequently, head movement/incorporation and multiple verb movement accounts wrongly predict root suppletion of the manner V1.

In contrast, an adjunction analysis of Type-A-RSVCs naturally derives the observed pattern. Assuming that the v_1P adjoins to causative v_2', the v$_1$ head does not intervene between Voice and v_2, as adjuncts are opaque to head movement (i.e. General Head Movement Constraint; Arregi & Pietraszko 2020, Baker 1988, 1985, Travis 1984).

(550)



Therefore, v_1 is not part of the local domain for suppletion of v_2. As v_1 is not selected by its own Voice head, Voice morphology on V1 is not expected. In order to account for the word order of V1 preceding V2 in Type-A-RSVCs, I propose that the Voice head undergoes Voice-to-*v* lowering (Arregi & Pietraszko 2020, Embick & Noyer 2001).

This analysis shows that suppletive (transitive) morphology provides evidence for an adjunction analysis of Type-A-RSVCs, as complementation analyses, such as head movement/incorporation or multiple verb movement struggle to account for the absence of suppletive morphology on the manner V1. Instead, the absence of suppletion is strongly predicted, if the V1 is adjoined to the causative V2.

8.2.3 Summary

Table 23 summarizes the results from the investigation of the morphosyntactic composition of Type-A-RSVCs in Daakaka. The morphosyntactic properties of Type-A-RSVCs indicate that two verbs are combined by the adjunction of the manner V1 to the causative V2. In the next section, I turn to the semantic type of composition, showing that Type-A-RSVCs belong to the class of means constructions, in which the manner V1 modifies the causing event entailed by the causative V2.

	Root-Root compound	**Causative Light verb**	**VP-VP complement.**	**VP-VP adjunction**	**Type-A-RSVCs**
Independent reduplication of V1 and V2	No	(Yes) (V2 only)	Yes	Yes	yes
Semantically equivalent to lexical use	(No) idiosyncratic meaning	(No) semantically bleached	Yes	Yes	Yes
Narrow rep. reading of *tetes* 'again'	No	No	No	Yes	yes
Transitive suppletion on V2 only	No	No	No	Yes	yes

Table 23: Results from the diagnostics on the morphosyntactic composition of Type-A-RSVCs in Daakaka.

8.3 Manner verbs as event modifiers (2)

In this section, I apply event semantic diagnostics to the semantic composition of Type-A-RSVCs in Daakaka, as proposed by Zimmermann & Amaechi (2020). The results indicate that the manner V1 modifies the causing event entailed by the causative V2 (section 8.3.1). Therefore, Daakaka Type-A-RSVCs not only belong to the class of means constructions, in which the causing event of a resultative predicate is modified by a manner adjunct, but also share their underlying morphosyntactic configuration. In particular, I propose an analysis of Daakaka Type-A-RSVCs, which is parallel to the analysis of Samoan Type-B-RSVCs, as the manner verb merges as a *v*P-sized modifier to the causative *v*P (section 8.3.2). However, in Daakaka Type-A-RSVCs, the internal argument of the manner adjunct can receive an interpretation separate from the internal argument of the causative predicate. Due to the fact that the internal argument in the *v*P adjunct cannot be overtly realized, I suggest that it is not syntactically projected, but existentially bound in the semantics (section 8.3.3). In this respect, Daakaka Type-A-RSVCs and Samoan Type-B-RSVCs differ significantly.

8.3.1 Event modification

Based on the event semantics diagnostics proposed by Zimmermann & Amaechi (2020), I show that the two verbal predicates are combined via Event Modification, in which the manner V1 modifies the causing event entailed by the causative V2. This includes evidence from (i) contradictory adverbs, (ii) aspectual marking, (iii) agent cumulativity and (iv) agent constancy (see section 6.4.2 for a discussion of the diagnostics in the context of Type-B-RSVCs). Consequently, Daakaka Type-A-RSVCs belong to the class of means constructions.

8.3.1.1 Contradictory adverbs

In Daakaka, (manner) adverbs are usually realized as TP-sized modifiers in multiple-marking SVCs (von Prince 2015; see section 4.3 on multiple-marking SVCs in Oceanic). In these constructions, the adverbials appear in a clause final position. This is shown below for the contradictory adverbs *medó* ‘be.slow’ and *perper* ‘be.fast, hurry’.[117]

[117] Recently, von Prince (2019b) has shown that certain (stative) roots can also directly attach to the verb root, without an additional TMA modifier. This construction appears to resembles adverbial particles in

(551) *Mwe te lee ente* ***ma medó*** */* ***ma perper.***
REAL cut.TR tree DEM REALbe.slow REAL be.quick
'S/he cut the wood slowly/quickly.'

Multiple-marking SVCs can be combined with single-marking SVCs to express the manner of the action denoted by the complex event. In paralellism with the non-serializing structure above, the adverbial SVC, e.g. *ma medó* 'slowly', is marked by a separate TMA marker and occurs in clause-final, but not in SVC-medial position.

(552) a. *Ma ta (*ma medó) tiwiye lee* ***ma medó.***
REAL cut.ITR REALbe.slow break.TR wood REAL be.slow
'S/he broke the wood slowly by cutting it.'

b. *Ma ta (*ma perper) tiwiye lee* ***ma perper.***
REAL cut.ITR REALbe.fast break.TR wood REAL be.quick
'S/he broke the wood slowly by cutting it.'

In general, manner SVCs appear to scope over the *action* subevent and not over the change subevent as the change subevent can be further modified in a separate clause by a contradicting adverb. If the manner adverb in the matrix clause took the change subevent in its scope, such elaborations would be ungrammatical.

(553) *Mwe ta tiwiye lee ente* ***ma perper,***
REAL cut.ITR break.TR tree DEM REALbe.quick

a lee ente mu mur / ma setyup ***ma medó****.*
but tree DEM REALfall REALbe.broken REAL be.slow
'S/he broke the tree quickly by cutting it, but the tree fell slowly.'

Additional support for this assumption comes from bi-clausal constructions in (554). Here, the initial clause specifically denotes the manner of an action, whereas the second clause stresses the result of this action with a Type-A-RSVCs.

---

other Oceanic languages (see also FN98 on adverbial particles directly following the main verb). This includes *medó* 'be.slow' (i)a. During my elicitation, one speaker realized *medó* in between the verb root and transitive marker *-ane* (i)b. Therefore, Type-A-RSVCs and single marking adverbial SVCs share their surface structure, despite their different semantics (see also von Prince 2015).

(i) a. *Ma oko medó.*
REAL walk be.slow
'She walks slowly.' (von Prince 2019b)

b. *Ma ta medó-ne lee.*
REAL cut.ITR be.slow-TR tree
'He cuts the tree slowly.'

The position of the adverbial particles in between the verb root and the transitive marker raises further questions concerning the morphosyntactic status of adverbials, as the absence of transitive suppletion on the main verb is unexpected in incorporation structures (cf. section 8.2.2.3). As a detailed investigation of adverbial particles is beyond the scope of this thesis, I leave the discrimination of their morphosyntactic status for future research. In this context, it would be highly relevant to check whether adverbial particles can occur in the RSVC-medial position, as observed for Samoan Type-B-RSVCs (see section 6.3.1.2).

(554) ??*Mwe te~te lee ente* ***ma perper,***
REAL RED~cut.TR tree DEM REALbe.quick

a ma ta tiwiye ***ma medó.***
but REAL cut.ITR break.TR REALbe.slow
Intended: 'S/he cut the tree quickly, but the broke it slowly by cutting it.'

In this context, contradictory adverbs are less acceptable as they introduce a contradiction. This contradiction only arises if the adverbs scope over the same event, namely the action subevent in both predicates. Crucially, this observation resembles the observation for lexical causatives in English, where manner adverbs have been shown to scope over the action subevent (see section 2.4; Martin & Schäfer 2014, Tomioka 2006, Higginbotham 2000). If it were possible to scope over the change subevent only, the sentence in (554) should be felicitous – which is not the case.

In addition, it is not possible for contradictory adverbs to modify Type-A-RSVCs in a single clause in which both adverbials SVCs are stacked in clause-final position. Even though clauses, in which two adverbial SVCs occur simultaneously, are rarely found in the corpus, comparable examples have nevertheless been observed.

(555) *Or ka te gaó* ***tu vu te wese*** *na apyang ka w=ane*
bush SUBJ DIST dry DIST good DIST enough COMPL fire ASR POT=eat.TR
'When the bush has dried to a degree that allows for burning it, …' (von Prince 2015: 342)

However, contradictory adverbs cannot simultaneously modify Type-A-RSVCs in a single clause, as this modification runs into a contradiction.

(556) #*Ma ta tiwiye lee ente* ***ma perper ma medó.***
REAL cut.ITR break.TR tree DEM REALbe.quick REAL be.slow
Intended: 'S/he broke the wood slowly/quickly by cutting it quickly/slowly.'

Therefore, Type-A-RSVCs cannot be modified by contradictory adverbs such as *medó* 'slowly' and *perper* 'quickly'. This result suggests that both the manner V1 and the causative V2 predicate over the same (causing) event.

8.3.1.2 Aspectual marking

In Daakaka, Type-A-RSVCs cannot be marked individually for aspectual values (von Prince 2015). Instead, the whole construction is preceded by a single TMA-marker, together with potential aspectual auxiliaries, assigning a single TMA-value to both verbs. Therefore, the presence of an additional TMA-marker precipitates a shift from a mono-

to a bi-clausal interpretation that differs from the resultative interpretation of Type-A-RSVCs. Also note that in the presence of an additional TMA-marker both verbs are separately marked for transitivity and the object is usually realized in the initial clause. Additionally, the verb *tiwiye* receives a manner interpretation, as the causative interpretation is mainly restricted to Type-A-RSVCs.

(557) a. *Bong* ***ma*** *ta* *tiwiye* *pwesye* *ente.*
Bong REAL cut.INTR break branch DEM
'Bong broke the branches by cutting them.'

b. *Bong* ***mwe*** *te* *pwesye* *ente (te)* ***ma*** *tiwiye*
Bong REAL cut.TR branch DEM and REAL apply.force.TR
'Bong cut the branches and broke them with his hands.'

Therefore, both predicates are necessarily marked for the same TMA values. This indicates that both events introduced by the two verbs are combined below the level of existential closure (see section 6.4.2.2; Zimmermann & Amaechi 2020, Stewart 2001).

8.3.1.3 Agent cumulativity

The agent cumulativity of Daakaka Type-A-RSVCs resemble Samoan Type-B-RSVCs, in that plural agents cannot be distributed over the events denoted by the respective verbs (see section 6.4.2.3; Zimmermann & Amaechi 2020). This is illustrated by the example in (558). Here, the context forces a reading, where Adam is the agent of the event denoted by the V1 (the hitting), whereas Bong is the agent of the event denoted by V2 (the breaking). Crucially, this situation cannot be expressed by a Type-A-RSVC.

(558) Bong and Adam wanted to cut down a tree. They went to the bush. Bong carried a hammer and Adam carried an axe. They came to a tree and Bong tried to bring the tree down with a hammer, but it did not work. Then, Adam cut the tree. He broke the tree by cutting it.

\# *Adam* *myane* *Bong* *nya* *nokis* *ye=m* ***tu*** ***tiwiye*** *lee .*
Adam with Bong 3DU both 3DU=REAL hit break.TR wood
'Adam and Bong together broke the tree by hitting it.'

Intuition suggests that the infelicity of (558) arises from the fact that the manner V1 is not a causative relation with the result state, denoted by the causative V2. Consequently, a bi-clausal construction is preferred, in which the two verbs are separately realized.

(559) *Bong mu tu lee te Adam ma ta tiwiye.*
Bong REALhit tree and Adam REAL cut.ITR break.TR
Bong hit the tree and Adam broke the tree by cutting it.'

Therefore, the absence of agent cumulation indicates that Type-A-RSVCs do not form plural events as agent cumulation would be expected under Event Cumulation.

8.3.1.4 Agent constancy

Moreover, Daakaka Type-A-RSVCs are subject to agent constancy. In instances of plural agents, both events must be jointly performed by all members of the plural subject. Therefore, Type-A-RSVCs are only marginally felicitous in contexts that force a reading in which a subset alone is involved in both events. This is shown in (560), in which a group of five men tries to cut down some trees, but only two of them are able to do so. In this context, a plural agent is only marginally acceptable.

(560) Five men went to the woods to cut down some trees. Each of them carried an axe, but two of the axes were very dull. As the wood was too strong, the men which used the dull axes were not able to cut down the trees. Therefore, only two men cut the trees down.

?? *Vyanten nyosi lim ye-m ta tiwiye lee*
person 3PC five 3PC-REAL cut.ITR break.TR wood
'Five men broke the trees by cutting them.'

Note that examples like (560) may be felicitous under a comitative interpretation in which all five men participate in an abstract *tree-felling* event. However, this comitative reading does not express the context above in a more literal sense.

8.3.2 Type-A-RSVCS as a means constructions

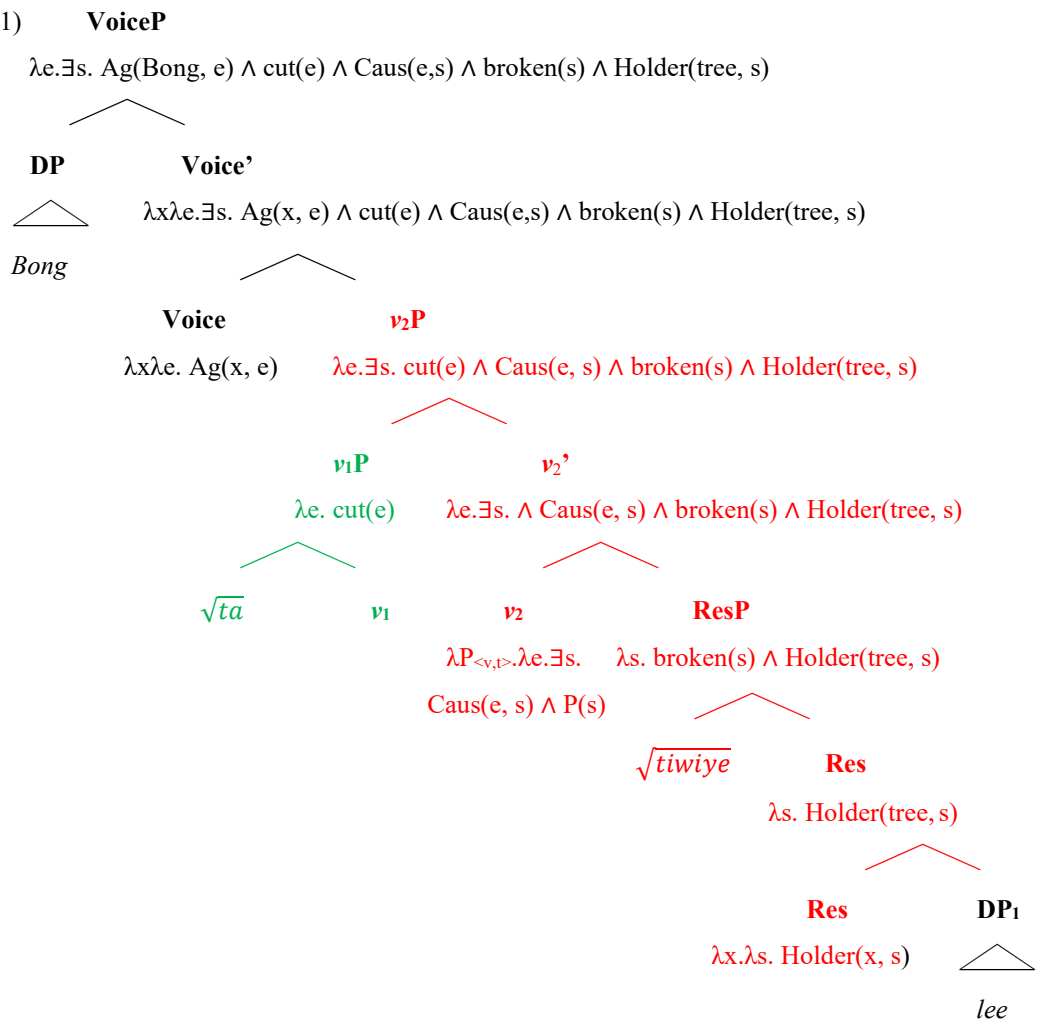
As summarized in Table 24, the results of the event semantic diagnostics indicate that the two predicates are combined by Event Modification (Zimmermann & Amaechi 2020). Therefore, the manner V1 and the causative V2 jointly predicate over the same event, or more precisely, the adjoined manner predicates modifies the underspecified causing event, which is entailed in the event structure of the causative V2.

	Event Modification	Event Extension	Event Cumulation	∃-Conjunction	Type-A-RSVCs
A-quantification	No	No	No	Yes	No
Contrary Adverbs	No	No	Yes	Yes	No
Agent cumulativity	No	No	Yes	No	No
Agent constancy	Yes	No	No	(Yes)	Yes

Table 24: The semantic type of composition in Daakaka Type-A-RSVCs.

As a result, Samoan Type-B-RSVCs and Daakaka Type-A-RSVCs are derived from the same morphosyntactic and semantic principles (see section 6.4.3). By providing a unified analysis for both Type-A- and Type-B-RSVCs, I propose that in Daakaka Type-A-RSVCs, the manner V1 merges as a v_1P in the modifying position (sister to *v*') of the causative v_2P. In this position, it modifies the underspecified event variable introduced by the v_2 head.

(561)



Regarding the morphosyntactic structure of the manner adjunct, I assume that it merges as a *v*P and not as Voice. This assumption is primarily based on the observation that the internal argument cannot be overtly realized. If the manner adjunct would contain a Voice projection, it would be predicted that the internal argument of the manner verb can be overtly realized, as it would be licensed by the secondary nominal licensing feature on the adjoined Voice head. Likewise, transitive morphology on the V1 would be expected (cf. section 7.3 on transitive morphology as Voice morphology). In the next section, I further investigate the status of the implicit argument.

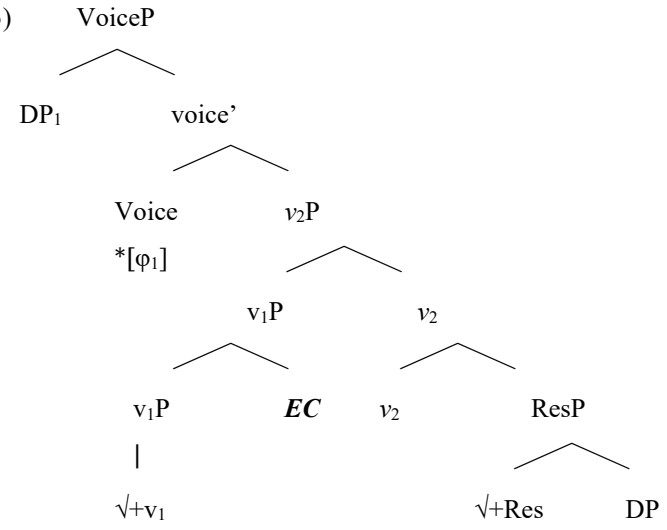
8.3.3 On the implicit argument of V1

In contrast to Samoan Type-B-RSVCs, the internal arguments of the two predicates in Daakaka Type-A-RSVCs need to be shared, although it cannot be overtly realized (cf. section 6.4.3). Instead, the implicit internal of manner V1 can be interpreted as an entity seperate from the internal argument of the causative V2. This is shown in (562), where the implicit argument of *ta* 'cut' is 'grass' and not *seli* 'road'.

(562) *Bong ma* ***ta*** ***sengave*** *seli.*
Bong REAL cut.ITR open.TR road
'Bong opened/cleared the road by cutting (the grass).'

However, the implicit internal argument of the manner V1 cannot be overtly realized. To account for this observation, I propose that the implicit argument in Type-A-RSVCs is not syntactically projected, but existentially bound. v_1 introduces a theme argument only on the semantic level.

(563)



As the open argument slot is not saturated by a DP, Existential Closure applies to rescue the type mismatch <e,st>, <st>, as Existential Closure closes off the open argument slot (Alexiadou et al. 2014a, Chung & Ladusaw 2004, also Dvořáková 2017, Tomioka 2006).

(564) a. $[\![v_1P]\!] = \lambda e \lambda x.\ cut(e) \wedge Pat(x, e)$
b. $[\![EC]\!] = \lambda f_{<e,\ st>}\ \lambda e \exists x.\ f(x)(e)$
c. $[\![EC]\!]([\![v_1P]\!]) = \lambda e \exists x.\ cut(e) \wedge Pat(x, e)$

Therefore, the implicit object of V1 is saturated before it combines with the causative V2. As the implicit object is not syntactically present, it avoids the requirements for nominal licensing and can be interpreted as an event participant distinct from the internal argument of V2. Note that the unavailability of an existentially bound internal argument supports the assumption that the V1 does not exhibit a Voice projection. As Voice is a secondary licenser in Daakaka, it would be expected that the internal argument can get licensed within the adjoined VoiceP. Consequently, for the internal argument, there would not be any restriction to be overtly realized. This is illustrated by the English means construction (see section 3.2).

(565) *Peter cleared the road by cutting the grass.*

As a result, Daakaka Type-A-RSVCs and Samoan Type-B-RSVCs differ significantly with respect to their internal arguments. While the internal argument of the adjoined manner predicate must be syntactically projected in Samoan, it is existentially bound in Daakaka. Crucially, this structural variation follows from the observation that Samoan generally disallows the existential binding of internal arguments, as indicated by the ungrammaticality of object deletion, whereas Daakaka is not subject to such a constraint.

8.4 Type-A-RSVCs and light verb constructions

Another crucial difference between Samoan Type-B-RSVCs and Daakaka Type-A-RSVCs is the obligatory status of the manner denoting V1. While in Samoan, the manner V1 merges optionally with causative verbs, causative verbs in Daakaka require the presence of the manner V1 to be felicitous (see section 7.4). In this property, Daakaka Type-A-RSVCs are reminiscent of light verb constructions in other 'Melanesian' languages (section also 4.2.4; Bradshaw 2010b, 1982). However, light verb constructions differ significantly from Type-A-RSVCs with respect to the semantic contribution of the V1 and the semantics of the V2. In Numbami, for example, Bradshaw (2010b, 1982) describes

the existence of highly productive resultative particles that have lost their independent verbal status and must co-occur with a light verb. In (566)a, for example, the resultative particle *uni* 'dead' combines with the light verb *lapa* 'hit', forming a causative predicate. However, *uni* 'dead' cannot function as the sole predicate of a clause as indicated by the ungrammaticality of (566)b.

(566) a. *Ti-**lapa** bola **uni**.* NUMBAMI
3PL-hit pig dead
'They killed the pig.'

b. * *Bola uni / i-uni.*
pig dead 3SG-dead
'the dead pig' / 'The pig died.' (Bradshaw 2010b: 9)

While on the first glance, the structure looks similar to Type-A-RSVCs in Daakaka, these resultative particles cannot only occur in causative, but also in anticausative contexts, as shown in (567). Here, the resultative particle *lele* 'turned' combines with the light verb *so* 'pierce'. Again, *lele* cannot function as a verb independently.

(567) a. *Ena mata i-so lele.* NUMBAMI
3SG.GEN eye 3SG-pierce turned
'His eyes rolled back/ he showed the white of his eyes.'

b. * *Ena mata lele / i-lele.*
3SG.GEN eye turned 3SG-turned
'his turned eyes' / 'His eyes turned back.' (Bradshaw 2010b: 9)

The availability of anticausative constructions in Numbami indicates that the resultative particle is not a causative predicate, such as serialized causative verbs in Daakaka, but introduces a stative, or anticausative, eventuality.

In addition, light verb constructions in Numbami differ from Daakaka Type-A-RSVCs regarding the (manner) V1 (Bradshaw 2010b, 1982). In section 8.2.1, I have demonstrated that the V1 slot in Daakaka Type-A-RSVCs can be productively filled by all kinds of manner verbs, as long as the resulting combination describes a possible (or likely) eventuality. In addition, the semantics of the manner verbs neither determines its ability to occur in Type-A-RSVCs nor is it affected by the construction. In Numbami, the

V1 is commonly realized by a semantically light verbs (Bradshaw 2010b, 1982).[118] Typically, these verbs express a broad meaning and are semantically bleached in a resultative construction. This is illustrated by the manner verb *lapa* 'hit, beat, pound'. When used as a light verb in a causative construction, it rather denotes a notion of affectedness.

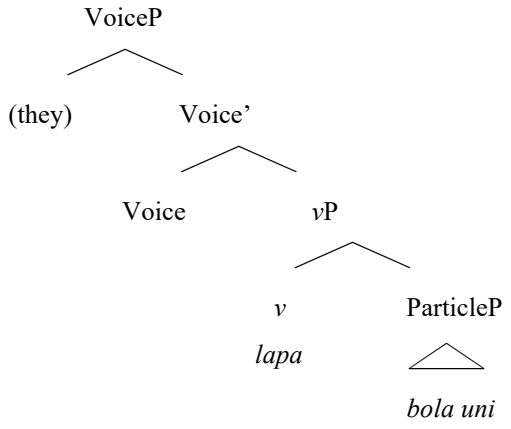
(568) a. *lapa boda* — hit covered — 'to cover'
b. *lapa lele* — hit turned — 'turn sth. around'
c. *lapa tomu* — hit snapped — 'break.off' / 'draw off water' NUMBAMI (Bradshaw 2010b: 11)

Crucially, this class of light verbs is not restricted to the verbal domain, but also forms verbal predicates by incorporating non-verbal elements such as nouns, often with an idiosyncratic meaning (Bradshaw 2010b, 1982).

(569) a. *lapa abuabu* — hit mud — 'to be covered in mud'
b. *lapa masina* — hit blood — 'to rust'
c. *lapa motawi* — hit custom — 'to preach' NUMBAMI (Bradshaw 2010b: 12)

Adopting a light verb analysis, the manner denoting verb can be interpreted as an allomorph of an functional head in the verbal domain, such as the causing event introducing *v* head that takes a complement (Aboh 2018, 2015a, 2009, Svenonius 2016, Folli et al. 2005). Here, the obligatory presence of this head can be related to the incapability of the particle to function as an independent verb on its own or to add up an action event to an inchoative or stative particle forming a causative predicate.

(570)



[118] Note that also verbs that denote a specific type of manner can also appear in this slot. However, Bradshaw (1982: 41) that the contribution of the resultative particle in this context rather denotes that the action denoted by the manner verb "was carried through its conclusion".
(i) a. *yomba* 'wrap' b. *yomba boda* wrap cover 'wrap up' (Bradshaw 2010b: 10)
Based on the small set of data that is available for Numbami, in the context of manner verbs, resultative particles appear to resemble particle constructions in languages like English or German (cf. Zeller 2001)

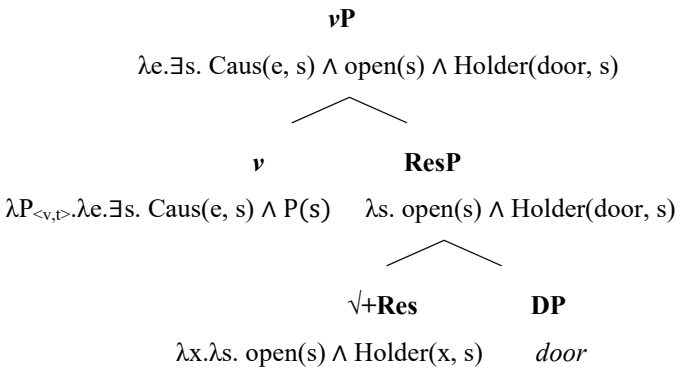
However, as I have demonstrated in this chapter, Daakaka Type-A-RSVCs are not an instance of light verb constructions, as they do not show the morphosyntactic and semantic characteristics that are associated with light verb constructions (cf. Table 25). Therefore, I suggest the serialization condition on causative verbs in Daakaka instantiates a distinct type of construction.

	Light verb constructions	**Type-A-RSVCs**
Lexical restrictions on V1	closed class	open class
V1 semantically bleached	yes	no
Inflectional morphology	(yes)	(no)
Compositional type	complementation	adjunction
Obligatoriness	yes	yes

Table 25: Properties of light verb constructions and Daakaka Type-A-RSVCs.

While the presence of a light verb in Numbami appears to be primarily motivated by the non-verbal status of the embedded complement, I hypothesize that the serializing condition on causative verbs in Daakaka is determined by semantic restrictions on the existential binding of event arguments in Daakaka. In section 2.2.4, I have argued that the event introducing categorizer *v* introduces an event variable that may modified by a manner root, causer PP or a means/manner adjunct in its modifying position of *v* (sister of *v*'). However, in the absence of such event modifiers, the causing event variable *e* is not specified by lexical material.

(571)



Consequently, the underspecified event is subject to contextual interpretation or existential interpretation in the absence of the latter. For English, it has been argued that in the presence of an agentive Voice head which introduce an agent role, the event is interpreted as an action event, while in the absence of Voice, it is interpreted as a change that finally

causes the result state (cf. Martin 2020, Alexiadou et al. 2015, Wood 2015, Ramchand 2008, Pylkkänen 2008, Levin & Rappaport Hovav 1995, but see Koontz-Garboden 2009).

(572) a. *Peter opened the window.*

b. ⟦[Peter opened the window]⟧ = ∃e.∃s. Ag(Peter, e) ∧ **Action**(e) ∧ Caus(e, s) ∧ open(s) ∧ Holder(window, s)

(573) a. *The window opened (by itself).*

b ⟦[The window opened]⟧ = ∃e.∃s. **Change**(e) ∧ Caus(e, s) ∧ ∧ open(s) ∧ Holder(window, s)

Given the obligatory specification of the causing event by a manner adjunct in the context of causative predicates, Daakaka may be subject to cross-linguistic variation in the licensing of contextual interpretation of underspecified event variables. Under this hypothesis, the causing event *e* may be interpreted contextually in languages like English or Samoan but not in languages like Daakaka. Instead, Daakaka would require the modification of the causing event *e* by lexical material, in order to being interpreted as an (action) event in causative contexts which in turn would license the agentive Voice head, which introduces the external argument.

However, this prediction is not borne out by the data, since Daakaka allows contextual interpretation of underspecified event variables in other contexts. This is shown in (574), where the verb *gene* 'make', which denotes an underspecified action event in the non-initial clause, is contextually interpreted as the action denoted by the predicate of the initial clause *ane* 'eat'. Therefore, language specific restrictions on contextual interpretation may not be the source of the serializing condition of Daakaka causative predicates.[119]

(574) *Bwe* ***an~ane*** *an suku mees nyoo. Webung ke~kevene bwe* ***gen~gene****.*
CONT RED~eat.TR 3SG.POS stuff food 3PL day RED~every CONT RED~make
'He ate all his food. He did this every day.' (von Prince 2013: 2731f)

Alternatively, cross-linguistic constraints on existential closer over open event variables may be responsible for the obligatory presence of manner verbs in the context of Daakaka causative verbs in Type-A-RSVCs. Notably, for some languages, it has been reported that existential closure requires the overt realization of syntactic material. In the Afroasiatic

[119] Note that the reduplication of *gene* 'make' indicates that *gene* is not a light/functional verb here, as reduplication is restricted to lexical elements (see section 7.4.3.1). Therefore, the example in (574) does not appear to be an elliptic construction, for which it has been suggested that the syntactic material of the second clause is deleted and replaced by a light verb at PF but potentially available at LF (e.g. Johnson 2009, Merchant 2001 inter alia; but see Chung et al. 1995, Hardt 1993 as well as Culicover & Jackendoff 2005 for alternative proposals potentially involving some sort of contextually interpretation).

language Bura and the Austronesian language Eastern Cham, for example, existential closure over is indicated by designated syntactic particles in the absence of contextual interpretation, e.g. in the context of negation (Backlawski Jr. 2018, Zimmermann 2007).

(575) a. *Pindar* ***#(adi)*** *ata sa mbal wa.* BURA
Pindar EC FUT drink beer NEG
'Pindar will not drink beer.' (Zimmermann 2007: 335)

b. *Kaw* ***#(hu)*** *ban kit o.* EASTERN CHAM
1SG EC eat what NEG
'I don't eat anything.' (Backlawski Jr. 2018: 10)

Yet, Daakaka differs from Bura and Eastern Cham in (at least) two crucial ways. Firstly, while Bura and Eastern Cham exhibit designated syntactic morphology, the EC particles *adi* and *hu* respectively, Daakaka makes use of lexical and functional verbs. Secondly, the serializing condition in Daakaka is not restricted to semantic contexts in which contextual interpretation is unavailable, as indicated by the general availability of contextual interpretation above. Instead, it appears that Daakaka does not license existential closure over lexically underspecfied – or better: syntactically covert – event variables. Therefore, every event variable *e* needs to be overtly realized by some lexical or functional material. In the context of Type-A-RSVCs, the ungrammaticality of independent causative predicates would then arise from the infelicity of existential closure over the syntactically covert causing event in the event structure of the causative predicate (576)b.

(576) a. *Bong ma* ***#(doko)*** *sengave beleem ente.*
Bong REAL pull.ITR open.TR door DEM
'Bong opened the door by pulling it.'

b. # ⟦Bong **ø** sengave beleem⟧ = ∃e.∃s. Ag(Bong, e) ∧ Caus(e, s)
∧ open(s) ∧ Holder (door, s)

c. ⟦Bong **doko** sengave beleem⟧ = ∃e.∃s. Ag(Bong, e) ∧ **cut(e)** ∧ Caus(e, s)
∧ open(s) ∧ Holder (door, s)

While this proposal requires a careful examination as it makes strong predictions about the inventory of verbal predicates in Daakaka, it might explain the absence of anticausative predicates as anticausatives also exhibit an underspecified event variable (cf. section 2.3). Future research on the relation between existential closure of open (event) variables and overt syntactic marking in Daakaka, and related Oceanic languages predicates that

show similar constraints (cf. section 4.2.4; also Gast et al. 2014, Næss 2012), may provide valuable insights on the serializing condition of causative predicates in Type-A-RSVCs.

8.5 Summary

This chapter reveals that Daakaka Type-A-RSVCs belong to the means construction, in which a manner verb modifies the causing event entailed by a causative verb. Consequently, Samoan Type-B-RSVCs and Daakaka Type-A-RSVCs share the same underlying type of resultative constructions. However, the investigation of the morphosyntactic and semantic properties of Type-A-RSVCs shows that this construction significantly differs from its Samoan counterpart regarding the status of the internal argument of the manner V1. In Samoan Type-B-RSVCs, the internal argument is syntactically projected, which leads to the observed identity constraint on the internal arguments. In contrast, I argue that in Daakaka Type-A-RSVCs, the internal argument is not realized on syntactic level, but existentially bound in the semantics. Therefore, the implicit internal argument of V1 can differ from the overt internal argument of the causative V2 if it satisfies the directness condition on the causative relation in resultative constructions (see section 3.1.2).

In addition, Daakaka Type-A-RSVCs differ from other resultative constructions in that the combination with manner verbs is mandatory for causative verbs. Consequently, causative verbs appear as bound forms that cannot function as independent predicates. In this property, Type-A-RSVCs appear to be related to causative light verb constructions, in which the V2 is embedded by a functional V1, which introduces the causing event, that is semantically only vaguely specified. Based on a comparison with causative light verb constructions in Numbami, I have highlighted the different morphosyntactic and semantic properties of the constructions, arguing that Type-A-RSVCs instantiate a distinct type of complex predicate building. To account for the serializing condition on causative verbs in Daakaka, I have suggested that Daakaka generally disallows covert event arguments to be existentially closed. Instead, the causing event must be identified by a lexical or functional verb as, for example, the manner V1 in Type-A-RSVCs. Although this hypothesis is supported by the potential absence of anticausative predicates in Daakaka, further research is required to better understand the mechanisms behind this condition.

Chapter 9: Concluding remarks

This chapter summarizes the insights of the morphosyntactic and semantic investigation of RSVCs in two Oceanic languages, Daakaka and Samoan. Here, I briefly summarize the results of the two case studies against the background of the structural variation that has been observed in Oceanic languages (as sketched out in chapter 4). I argue that the distribution of Type-A-RSVCs (Daakaka-type) and Type-B-RSVCs (Samoan-type) is governed by the lexical inventory of the respective language. This analysis predicts that Oceanic languages exhibit both types of RSVCs, borne out by languages like Saliba/Logea. I then, turn to the cross-linguistic implications of this study for the internal organization of (resultative) SVCs more generally by highlighting that the term 'verb serializing' refers to diverse syntactic and semantic phenomena (section 9.1).

Building on the Oceanic data, I focus on the broader implications for a typology of resultative constructions in the world's languages. The investigation of this thesis indicates that the basic classification of satellite-framed and verb-framed languages can also be applied to serializing languages, in that either the manner or the result predicate functions as the matrix predicate in a resultative construction. While it has been suggested that RSVCs are similar to resultative secondary predication in non-serializing languages, this thesis presents additional evidence that in a subclass of serializing languages, RSVCs have the internal argument and event structural properties of means constructions. On the one hand, this supports the proposed typology of resultative constructions, suggesting that cross-linguistic variation is driven by language specific constraints on argument and event structure building (e.g. idiosyncratic requirements of roots or selectional restrictions on complements, etc.). On the other hand, the existence of anticausative secondary predicates calls for a more fine-grained typology on par with motion constructions (cf. Son & Svenonius 2008), which should be addressed in future research. (section 9.2).

Finally, the investigation of the lexical semantics in two Oceanic languages, Samoan and Daakaka, supports the hypothesis of manner/result complementary. However, the findings support the intuition that the hypothesis is primarily related to root meaning, rather than verb meaning, as verbal predicates may entail a causing event or result state without specifying it. The latter class of causative manner verbs is frequently found in Samoan but has rarely been described before. Additionally, the novel observation of a

manner condition on causative verbs in Daakaka provides additional cross-linguistic insights on the relation of manner and result components (section 9.3).

9.1 RSVCs in Oceanic

As shown in chapter 4, resultative constructions vary significantly across Oceanic languages. Four basic types of serializing strategies have been identified: On the on hand, there are Type-A- and Type-B-RSVCs, in which the result component is realized by a transitive causative verb. Although the result-denoting predicate exhibits the same argument and event structure in both types, Type-B-RSVCs differ from Type-A-RSVCs in the presence of causative morphology. On the other hand, Type-C-RSVCs resemble resultative secondary predication, in that the result state is realized by a stative or anticausative verb. Further to this, there are resultative compounds in which at least one of the predicates cannot occur outside of the construction as an independent predicate. Therefore, Oceanic languages are an ideal candidate through which to explore (micro)variation in the resultative domain within a single language family (cf. Verkerk & Frostad 2013, Bradshaw 1982). However, most languages are still fairly understudied, not only when approaching resultatives, but also in terms of the argument and event structure of independent verbs. As morphosyntactic and semantic analyses of complex predicates requires a careful examination of the determining morphosyntactic and semantic factors, I decided to focus on RSVCs with transitive result-denoting predicates. This decision was made as there are crucial differences between this type and English-type resultative secondary predication. Therefore, I conducted two case studies on Daakaka and Samoan, each representing a distinct subtype of this class of RSVCs (i.e. Daakaka = Type-A-RSVCs, Samoan = Type-B-RSVCs), to address the underlying morphosyntactic and semantic language specific properties that are responsible for this variation within Oceanic languages.

Based on the morphosyntactic and semantic analysis of simple predicates in Samoan and Daakaka, I attribute the complementary distribution of Type-A- and Type-B-RSVCs to the language specific lexical inventory of the two languages. On the one hand, Samoan appears to predominantly derive causative predicates by the causative prefix *fa'a-*. Instead, causative predicates either denote the manner of the causing event (i.e. causative manner verbs like *fa'i* 'break off', 'pull twist until sth. is broken') or are predominantly derived by the causative prefix *fa'a-* (i.e. *fa'a*-causatives like *fa'a-gau* 'break'). Thus, the absence of Type-A-RSVCs correlates with the marginality of lexical

causative predicates in Samoan.[120] On the other hand, Daakaka does not exhibit causative morphology at all. Instead, stative PC-verbs can form causative variants without overt causative morphology, but solely take the transitive marker *-ane*. Crucially, in Daakaka, these zero-derived causatives can enter RSVCs (e.g. *mwelili* 'be.small' → *mwelili-ane* 'to make small'). Consequently, the absence of Type-B-RSVCs correlates with the absence of morphological causatives in the language. If the distribution of Type-A- and Type-B-RSVCs is governed by the general availability of lexical and morphological causative verbs, we expect languages that have both lexical and morphological causatives to form both Type-A- and Type-B-RSVCs.

This predication is borne out by languages like Saliba/Logea. Margetts (2005) shows that RSVCs fall into two classes based on the presence of causative morphology on the result-denoting V2 (cf. sections 4.2.1 and 4.2.2 for additional examples. Therefore, lexical causative verbs like *kesi* 'break' appear without causative morphology (577)a, while morphological causatives like *he-mwaloi* must appear to obligatorily combine with the causative prefix *he-* (577)b (578).

(577) a. *Yo-**koi**-**kesi**-ø.* SALIBA/LOGEA
3SG-hit-break-3SG.OBJ
'He broke it.'

b. *Ye-**koi**-**he-mwaloi**-ø.*
3SG-hit-CAUS-dead-3SG.OBJ
'He hit it dead.'

c. * *Ye-**koi**- **mwaloi**-ø.*
3SG-hit-dead-3SG.OBJ
Intended: He hit it dead.' (Margetts 2005: 70)

Both types of causatives also occur outside of RSVCs as independent predicates of a clause (578). This supports the assumption that in Oceanic languages, the lexical inventory of the language determines the distribution of Type-A- and Type-B-RSVCs.

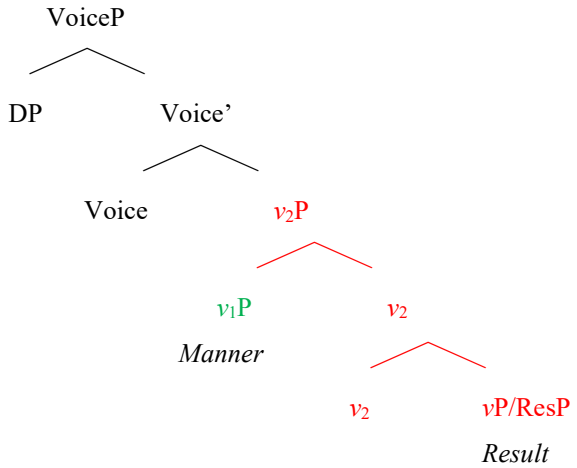
[120] Note that Samoan can derive causative predicates by the causative prefix *ta-* (e.g. *ta-tala* 'to open') or by reduplication (*ga~gau* 'break') – though this appears not to be as productive as the causative prefix *fa'a-* (Milner 1966, Mosel & Hovdhaugen 1992). Crucially, these causatives cannot enter RSVCs in Samoan. To account for this observation, further investigation on the morphosyntactic and semantic properties of this class of verbs is necessary. If these causative verbs turn out be lexical causative result verbs that do not modify the causing event, their incompatibility with RSVCs may arise from restrictions on the case assignment of the internal argument of the adjoined predicate, as the internal argument would not be in a ATB-configuration (cf. Daakaka RSVCs in section 8.3.2).

(578) a. *Galasi* *ya-**kesi**-ø.* SALIBA/LOGEA
glass 3SG-break-3SG.OBJ
'I broke the glass.' (Margetts 1999: 200)

b. *Isu-a-wa* *ye-**he-loha**-ø.*
nose-3SG-TOP 3SG-CAUS-long-3SG.OBJ
'He made his nose long.' (Margetts 1999: 171)

Despite this language specific variation with regard to causative predicates, the case studies revealed that both Type-A- and Type-B-RSVCs share their underlying morphosyntactic and semantic composition. For both types of RSVCs, I have argued that the causative verb is the main predicate of the resultative construction, based on morphological, syntactic and semantic grounds. In contrast, the manner verb functions as an event modifier to the causing event entailed by the causative predicate, i.e. Predicate Modification in which both verbs predicate over the same (causing) event. Crucial evidence for the adjunct status of the manner V1 comes from the availability of a narrow repetitive reading of repetitive modifiers, such as Samoan *toe* 'again' and Daakaka *tetes* 'again', which is expected in adjoined structures, but not in complementation structure. Consequently, both Type-A- and Type-B-RSVCs belong to the same morphosyntactic and semantic class of RSVCs that are related to the *means*-construction in non-serializing languages such as English (see chapter 2).

(579)



Although in Daakaka and Samoan, both types of RSVCs instantiates the same underlying type of morphosyntactic and semantic composition, the case studies demonstrate that resultative constructions in Oceanic are subject to microvariation determined by more general morphosyntactic and semantic properties of the respective language. For example, Samoan and Daakaka differ in terms of object deletion. While Daakaka allows object

deletion in the context of manner verbs (as cross-linguistically expected), all transitive verbs in Samoan require the syntactic projection of a (silent) internal argument. This type of cross-linguistic variation influences the status of the internal argument of the adjoined manner V2. As seen in both languages, the internal argument needs to be licensed by the matrix Voice head, as the *v*P-adjunct does not carry any licensing feature by itself. In Daakaka, this issue is resolved, in that the internal argument is not syntactically projected, but existentially bound on a semantic level. Therefore, the internal argument of the adjunct clause does not need to be syntactically licensed (as it is not structurally present), and allows for a different interpretation to that of the internal argument of the causative V2, as long as it satisfies the constraints on direct causation (i.e. no intervening causer).

In contrast, the internal argument of V1 must be syntactically projected in Samoan and hence, must be licensed by the matrix Voice head. To make a parallel licensing of the internal arguments of the adjoined manner and the causative matrix predicate possible, the adjoined manner predicate and the embedded stative predicate must be in an ATB-configuration, in which both internal arguments can undergo ATB-movement into the case position of Spec, VoiceP. As ATB-movement is subject to identity conditions on the moved constituents, the internal argument of the adjoined manner predicate must be identical to that of the in Daakaka and Samoan causative matrix predicate. Consequently, the status of the internal argument of the manner V1 is much more constrained than in Daakaka-type RSVCs, showing greater flexibility regarding to the internal argument of the adjoined predicate.

Moreover, Daakaka Type-A- and Samoan Type-B-RSVCs differ significantly with respect to the presence of the manner predicate in the context of causative verbs. While in Samoan, *fa'a*-causatives optionally combine with a manner predicate, in Daakaka, lexical causatives are subject to a serialization condition, in that they necessarily combine with a manner predicate. In section 8.3.3, I have proposed that this condition results from the absence of an interpretational rule on the semantic level of the derivation that allows underspecified event variable to be existentially interpreted. This analysis has been supported by the general absence of anticausative predicates in Daakaka in which the causing event is equally underspecified. Given the serializing condition on causative predicates in Daakaka, additional research is needed to determine the interaction between manner and result meaning components in Oceanic languages and beyond.

From an Oceanic perspective, Type-A- and Type-B-RSVCs differ significantly from Type-C-RSVCs in their argument and event structure. While in Type-A- and Type-

B-RSVCs, in Type-C-RSVCs the result state is denoted by causative predicates, the result state is expressed by stative or anticausative predicates (580)b (see chapter 4). In this characteristic, Oceanic Type-C-RSVCs resemble resultative secondary predication in other serializing languages, such as Édò, Lao or Mandarin. Whether a complementation analysis also extends to Oceanic Type-C-RSVCs needs to be addressed in future research. In particular, languages that exhibit both Type-A- or Type-B- as well as Type-C-RSVCs, such as Samoan or Ughele, may contribute to a better understanding of the morphosyntactic and semantic differences of the two constructions (cf. Frostad 2012 on Ughele).

(580) a. *Sā* ***solo*** ***fa'a-mama*** *e* *Pita* *le* *laulau.* SAMOAN
PST wipe CAUS-clean ERG Peter SPEC table
'Peter (volitionally) wiped the table clean.'

b. *Sā* ***solo*** ***mama*** *e* *Pita* *le* *laulau.*
PST wipe clean ERG Peter SPEC table
'Peter wiped the table clean.'

In addition, resultative compounds – in which either one or both constituents of a resultative construction cannot appear outside of the constructions – raises additional questions as to the morphosyntactic and semantic composition of the two predicates. While I in chapter 8 have argued that the serializing condition on Daakaka causative verbs is responsible for the bound character of causative elements in this language, alternative analyses may account for the configuration in other languages. Firstly, some languages may instantiate light verb constructions, as have been described for Australian languages like Ngarinyman as well as for Niger-Congo languages like Gungbe (cf. Denniss 2019, Aboh 2009, Butt & Geuder 2001, also Hagemeijer 2001). In this type of construction, the manner V1 can be interpreted as a realization of the causing event introducing *v* head itself. Therefore, this type of construction contrasts with other types of verb serialization, in that the manner component is not realized by a root but by a functional head. An analysis along these lines has been proposed by Bradshaw (2010b) for Oceanic languages in mainland Papua New Guinea such as Numbami, which have replaced causative morphology by light verb constructions (see section 8.4). Additional research may support this account and show if it applies to other Oceanic languages as well.

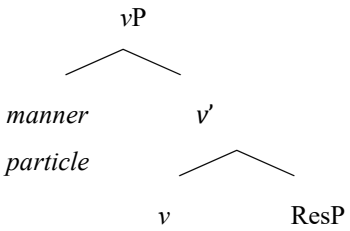
(581) *Ti-lapa* *bola* *uni.* NUMBAMI
3PL-hit pig dead
'They killed the pig.' (Bradshaw 2010b: 9)

An even more extreme case of syntactic integration of the manner and result predicate has been observed in Oceanic languages with resultative compounds in which neither the manner nor the result denoting constituent can function as an independent predicate (e.g Äiwoo, Tîri or Xârâcúú; see chapter 4.2.4).

(582) *Nyenaa-ee* *i-lä-ki-no.* ÄIWOO
tree-DEM PFV-chop-break.rigid.object.TR-1MIN.A
'I chopped this tree down.' (Næss & Boerger 2008)

On the one hand, these structures may represent a case of root compounding. Thereby, resultative compounds may challenge basic assumptions on event (de)composition in the syntax, with respect to root categorization and root merger (cf. Liu 2019 on Mandarin resultatives, Song 2017, Zhang 2007). On the other hand, the manner V1 could also be interpreted as manner particles, i.e. as the mirror image of resultative particles in languages like German. Under such an analysis, the manner component would be realized by non-verbal but yet eventive element in the modifying position of *v*, as illustrated in (583) (cf. Talmy 2016 for related thoughts on the Hokan language Atsuwegi). The bound character of resultative compounds would arise from semantic constraints, as seen in Daakaka.

(583)



Finally, resultative constructions are commonly expressed by multiple marking SVCs in Oceanic languages. While the serializing status of this construction is under debate, it has been proposed that in such constructions V2 functions as a structurally reduced adverbial clause (cf. von Prince 2019b, 2015, Cleary-Kemp 2015). If such analyses also applies to stative V2s in multiple marking RSVCs, multiple-marking RSVCs would resemble spurious/adverbial resultatives, or purpose clause-like structures, in non-serializing languages (cf. Baker & Stewart 2002 for a relation of SVCs and purpose clauses, Washio 1997 on spurious SVCs like *Peter cut the meat thinly*).

(584) *Bong mwe te lee ente ma mwelili.* DAAKAKA
Bong REAL cut tree DEM REALbe.small
'Bong cut the small.'

With this structural variation in the resultative domain, Oceanic languages present an ideal candidate for a comparative case study on morphosyntactic and semantic, or even historical aspects of resultative serial verb constructions (cf. Gast et al. 2014, Verkerk & Frostad 2013, Bradshaw 1982). However, as indicated by the tentative nature of the discussion in this section, the morphosyntactic and semantic properties of resultatives in most of the over 450 Oceanic languages are only barely described to date. For many languages, the available data is limited to a few basic examples in reference grammars or grammar sketches that do not cover the range of resultative structures found in the language. Further complications arise from the lack of detailed descriptions of morphosyntactic and semantic properties of verb classes that include negative evidence – with Polynesian languages as notable exceptions. As more and more research is conducted on the understudied languages in the Pacific, comparative studies of the (micro-)variation in the resultative domain become possible.

9.2 Towards a typology of resultative constructions

Under a broader perspective, the investigation of RSVCs in Samoan and Daakaka support the assumption that RSVCs are a typologically diverse phenomenon that exhibit significant variation in their underlying morphosyntactic and semantic properties (cf. overview in section 3.3.3). On the one hand, RSVCs in languages like Édò, Lao or Mandarin have been argued to be instances of resultative secondary predication, in that the manner predicate is the matrix predicate of the clause that takes the stative/inchoative result-denoting (secondary) predicate as its complement. This contrasts with Oceanic Type-A- and Type-B-RSVCs, which I argue resemble the means construction in which the causative predicate acts as the main predicate with the manner structurally adjoined. Similar analyses have been proposed for languages like Uyghur, Japanese and Korean, in which the result-denoting predicate is also realized by a causative verb. In this construction, the manner predicate modifies the underspecified causing event entailed by the causative verb. Therefore, both types of RSVCs differ significantly in their morphosyntactic and semantic composition. In verbal resultative secondary predication, the stative/anticausative V2 is an argument/complement of the matrix manner predicate. Here, the two predicates are in a causative relation which is read off the structural syntactic configuration at the C-I interface. In the verbal means construction, causative relation between the causing event and the result state is entailed by the causative predicate itself. Thus, the two predicates are not in a causative relation, but in a modifying relation.

	Resultative SP	Means construction
Manner predicate	verb	verb
Result predicate	verb (stat./anticaus)	verb (causative)
Main predicate	Manner	Causative
Secondary predicate	Result	Manner
Semantic relation	Causative	Modification

Table 26: Morphosyntactic and semantic properties of resultative secondary predication and the means construction in serializing languages.

Focusing on the properties of the means constructions in serializing languages, it appears that the adjunction of two *v*P is subject to a matching condition, in that the adjoined manner *v*P must match the morphosyntactic and semantic properties of the causative *v*P. For example, if the causing eventuality is an event, the means adjunct cannot be realized by a state predicate – as shown for both Samoan and Daakaka in this thesis. While this also applies to the means construction in non-serializing languages such as English (cf. Truswell 2007b), a matching condition seems to be a general feature of the adjunction, or better still the serialization, of two constituents of the same category (cf. Ko & Sohn 2015 on Korean VoiceP-serialization, Kalin & Keenan 2011 on Malagasy TP-serialization, Baker & Stewart 2002 on Édò *v*P-serialization). In the context of RSVCs, this condition arises from the fact that both verbs predicate over the same event which necessarily constrains the event-type of the two verbs. Whether a similar reasoning also applies for other types of verb serialization needs to be addressed in future research.

A further observation is that in serializing languages that exhibit the means construction, the two verbs typically occur directly adjacent to each other, with the adjoined manner verb preceding the causative verb. This observation is unexpected as it indicates that the causative matrix verb does not undergo head movement over the manner adjunct to a higher position in the clausal spine. This can be observed in non-serializing languages like English where causative matrix predicates and the object move over the means adjunct which strands in clause final position.

(585) *Peter cleaned the door by wiping it.*

Interestingly, the serializing languages for which the verbal means constructions have been described arguably lack head movement of the verb to a higher position. In Samoan, for example, the whole VP undergoes phrasal movement to a specifier in the inflectional domain, which is why the internal structure of the VP remains intact. Moreover, head-final SOV languages like Japanese or Korean have been proposed to be derived by cyclic

phrasal movement of the VP (Kayne 2003) or by head lowering (Han et al. 2007, Aoyagi 2006). Finally, the preverbal order of TMA particles in Daakaka suggest that the verb does not move out of its base position in these languages. Therefore, it seems that the verbal means construction in serializing languages correlates with the absence of head movement of the verb into the inflectional domain. Whether this correlation holds for a wider range of languages may be subject to further typological studies. Note, however, that a special relationship between TMA marking and verb serialization has also been discussed in the context of verbal secondary predication and verb serializing more generally (e.g. Stewart 2001, Collins 1997, cf. Veenstra & Muysken 2017 for discussion).

Comparing serializing with non-serializing languages, both types of languages exhibit the same variation with respect to event composition in resultative complex predication. While satellite-framed languages like English or Lao express resultative meaning proto-typically via resultative secondary predicates, verb-framed languages, like Romance or Samoan and Daakaka, make use of the means construction. Therefore, this study supports the cross-linguistic evidence that RSVCs cannot be reduced to a categorial split in resultative secondary predication (cf. Lambert-Brétière 2009, Collins 2002, 1997, Larson 1991) or represent a distinct type of equipollent-framed languages (cf. Ameka & Essegbey 2013, Slobin 2004, Zlatev & Yangklang 2004).

	Resultative SP		**Means construction**	
	Non-serializing	**serializing**		**non-serializing**
Manner predicate	verb	verb	verb	Gerund Preposition
Result predicate	adjective, PP	verb (stative, anticaus)	verb (causative)	verb (causative)
Main predicate	Manner	Manner	Causative	Causative
Secondary predicate	Result	Result	Manner	Manner
Semantic relation	Causative	Causative	Modification	Modification

Table 27: Morphosyntactic and semantic properties of resultative secondary predication and the means construction in serializing and non-serializing languages.

Furthermore, the presence of anticausative secondary predicates in RSVCs also supports Son & Svenonius (2008) proposal that lexicalization of manner and result in resultative construction should not be reduced to a binary distinction (cf. Talmy 2016, 2000) but

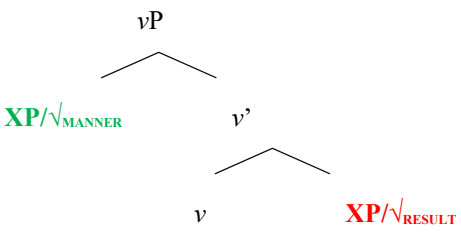
exhibits a more fine-grained division, including (at least) manner, change and result. According to this assumption, stative secondary predicates solely lexicalize the result component while anticausative secondary predicates lexicalize both result and change component. In the means construction, all subcomponents are lexicalized by the causative predicate itself. In future research, it would be interesting to investigate whether the type of secondary predicate has an influence on the semantic interpretation of the causative relation between the two predicates, with respect to direct and indirect causation.

(586)

	[manner]	[change]	[result]
Stative SP:	----P1----	ø	---P2---
Anticausative SP:	----P1----	----------P2----------	
Means/Causative:	----------P2----------		

In this thesis, I have argued that the cross-linguistic variation found in resultative complex predication can be modelled in terms of language specific morphosyntactic and semantic constraints on the realization of manner and result meaning components. Adopting a syntactic approach, I have proposed that resultative meaning follows from a specific configuration of manner and result, with respect an event introducing *v* head. Consequently, the *v*P is the domain for the causative interpretation between two eventualities.

(587)



Cross-linguistically, languages are expected to differ with regard to the categorial type and the morphosyntactic size of their meaning components. As discussed in this thesis, languages may be classified into serializing and non-serializing languages according to whether they allow both meaning components to be realized by verbal elements or not. In addition, languages can vary with respect to the morphosyntactic size of the respective components. On the one hand, the adjoined predicate is structurally reduced in Daakaka and Samoan RSVCs, as it does not introduce an external argument role. In the English means construction however, the manner/means adjunct introduces an external argument role. On the other hand, in Samoan RSVCs, the result component is realized by a stative or eventive *v*P, but by root in the English or Daakaka means construction it is realized by a root. As has been argued in the previous section, this type of cross-linguistic variation

is often determined by more general constraints on argument and event structure building in the respective language (see section 6.4).

The proposed configuration may be extended to consequential SVCs in which two action events appear in a causative relation under a single Voice projection (Zimmermann & Amaechi 2020, Bohnemeyer & van Valin 2017, Stewart 2001).

(588) *Úchè gbù-rù òkúkò sí-é.* IGBO
Uche kill-PST chicken cook
'Uche killed and cooked the chicken.' (Zimmermann & Amaechi 2020: 2)

Therefore, instead of a result-denoting VoiceP some serializing languages can merge a bare action *v*P to the causing event introducing *v* head. This type of causative structure differs from bi-clausal causatives, such as English periphrastic causatives, in which the caused predicate introduces its external argument by its own (intermediate) Voice projection, with regard to morphosyntactic and semantic properties. One reflex of this structural configuration is that both consequential and resultative SVCs express a direct causative relation between the two eventualities denoted by the respective predicates – this is in contrast to periphrastic causatives which usually allow for indirect readings. However, additional studies are needed to provide further insights into the internal morphosyntactic and semantic organization of consequential SVCs, and their cross-linguistic relation to resultative SVCs.

Finally, the causing event-introducing head may contribute general semantic information on the nature of the causing event in light verb constructions that superficially resemble RSVCs. The crucial difference between these two types of constructions is the functional nature of the manner V1 in light verb constructions which can be assumed to spell out the causing event introducing *v* in Persian as well as in Gbe or Australian languages (Aboh 2015a, 2009, Folli et al. 2005, cf. Baker & Harvey 2010, Butt 2010). However, the semantic contribution of the light verb is vague in comparison with lexical verbs. Therefore, morphosyntactic variation is expected according to the morphosyntactic size of the complement which once again, influences possible semantic interpretations (i.e. direct vs. indirect causation) – as suggested by Aboh (2015a) in the context *fe* 'make' and *bay* 'give' causatives in Haitian.

In sum, the analysis of resultative constructions suggests that most cross-linguistic variation can be modelled within a single configurational account of the composition of manner and result components within the *v*P, as given in (587). With respect to the degree of morphosyntactic and semantic integration, there is the intuition that the presence of an

independent Voice projection for both predicates (i.e. an individual agent for both predicates triggers a bi-clausal interpretation in which two independent eventualities are combined). As verb serialization typically refers to monoclausal constructions, this term should be reserved for complex predicate formation below Voice – an intuition shared by other authors as well (e.g. Zimmermann & Amaechi 2020, Aboh 2009, Baker & Stewart 2002).

9.3 Manner/result complementarity and root meaning

Lastly, the investigation of the morphosyntactic and semantic composition of RSVCs in two Oceanic languages also sheds new light on the hypothesis of the manner/result complementarity in the lexicalization of verbal meaning, as proposed by Rappaport Hovav & Levin (2010). According to this hypothesis, verbal predicates either denote the manner of an action or name a result state, but not both manner and result at the same time. By analyzing the event and argument structure of verbal predicates outside of RSVCs, manner/result complementarity also seems to hold true for Daakaka and Samoan, with respect to the standard diagnostics that have been proposed in the literature (e.g. Alexiadou et al. 2017, Beavers & Koontz-Garboden 2012, Rappaport Hovav & Levin 2010). Therefore, the two case studies on underdocumented Oceanic languages support the potential universal nature of the complementary distribution of the meaning components across verbs (cf. Gast et al. 2014 on Xârâcùù and East Futunan, Næss 2012 on Äiwoo). However, the examination of the morphosyntactic and semantic properties of verbal predicates in Samoan and Daakaka reveals some unexpected pattern that provide novel insights on the interaction between argument and event structure and root meaning.

Firstly, Samoan exhibits a class of causative manner verbs that primarily denote the manner of an action while simultaneously entailing an underspecified result state (e.g. *solo* ‘wipe’; see section 5.4.3). Previously, such a class of bi-eventive manner verbs has only been observed in very restricted contexts, e.g. in the presence of non-agentive, causer arguments in French (Alexiadou et al. 2017, also Anagnostopoulou 2017 on Greek). Whereas the result state is only optionally entailed in French, in Samoan, causative manner verbs obligatorily entail a result state. Under a traditional interpretation of the manner/result complementarity, the entailment of a result state in the event structure of manner denoting verbs is unexpected, as it predicts that a verb has either a manner or result component, i.e. the result state should only be entailed if it is named by the root.

However, recent interpretations of the manner/result complementarity suggest that the distribution is independent from the event structure of a verbal predicate, but determined by root class – a root can either function as an event modifier or as an event argument, but cannot function as both types at the same time. Consequently, the event structure of a predicate does not determine root meaning, as event modifying (manner) roots can generally appear in bi-eventive causative configurations or sometimes even require the presence of an underspecified result state, as in the context of Samoan causative manner verbs (cf. Paul et al. 2016 on Malagasy). In this respect, causative manner verbs are the mirror image of causative result verbs in which the causing event is underspecified but the result state named by the root. In addition, the observation of causative manner verbs further supports the analysis of *break*-type verbs in English that have been proposed to be event modifiers requiring the presence of an (underspecified) result state (Embick 2009). However, as noted by Alexiadou et al. (2017), *break*-type verbs differ from prototypical manner roots by leaving the manner of the causing event underspecified. This may demand further differentiation between causative manner roots and causative result roots. One potential interpretation may take *break*-type roots to modify the change sub-event rather than action subevent. In future research, these slightly different properties of event-modifying roots require additional cross-linguistic investigation.

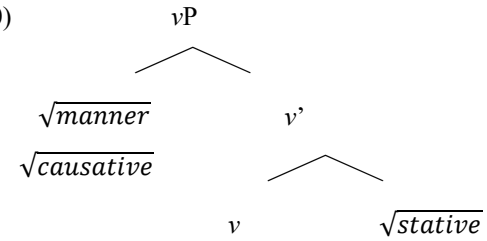
Secondly, in Daakaka many causative verbs have a manner variant derived from the same root (e.g. *tiwiye* 'break, apply manipulative force'; cf. section 7.4.2). Significantly, in Type-A-RSVCs, the manner component drops out if the verb is used as a causative result verb. Therefore, in the causative use it solely denotes the result state caused by an underspecified (action) event. Cross-linguistically, such a pattern has been described for *cut*-type verbs in English, which can also function as either manner or result verb (Levin & Rappaport Hovav 2013). The ambiguous behavior of this root class indicates that they are underspecified with respect to predication properties, which explains why they can function as both predicates of event and predicates of states. Based on this observation, four root classes can be identified that are stored at the encyclopedia.

(589) a. $\sqrt{eventive}$: predicates of events
b. $\sqrt{causative}$: predicates of events must combine with a state
c. $\sqrt{stative}$: predicates of states
d. $\sqrt{underspecified}$: predicates of events or states

By adopting a morphosyntactic approach to event composition, the respective root class determines the morphosyntactic position of the root. While eventive and causative roots

appear as event modifiers in the modifying position of the event introducing *v* (i.e. as sisters of *v*'), stative roots appear in the complement position of *v* within a pre-categorized ResultP introducing the internal argument. In contrast, underspecified roots can appear in both positions.

(590)



The existence of underspecified ('ambiguous') roots also has further implications for the identification of root meaning, as their semantics appear to be determined by the syntactic configuration the roots appear in. The configurational sensitivity of the interpretation of these roots supports the assumption that the roots themselves are void of specific semantic information but refer instead to an abstract area in the conceptual space that ties the different meanings together. Therefore, a single root can either denote a state or an event depending on the syntactic configuration it appears in (cf. Mateu & Acedo-Matellan 2012, Acquaviva 2009, Borer 2005b, Arad 2003). Still, since not all root classes exhibit the same degree of variability, roots must be listed with their properties in the encyclopedia.

Thirdly, the serializing condition on causative verbs in Daakaka raises additional questions about the interaction of manner and result meaning components in the world's languages. In this thesis, I have proposed that the obligatory presence of the manner verb in the context of a causative verb results from the language specific constraint on existential closure over bare – or better: underspecified – event variables. Similar constraints on overt existential closure have been reported for other languages, such as Eastern Cham or Bura (Backlawski 2018, Zimmermann 2007). Crucially, this hypothesis is supported by the general lack of anticausative predicates in Daakaka. To interpret causative meaning, the causing event entailed by the causative verb must be identified by a root (or light verb) in Type-A-RSVCs. However, this hypotheses is rather descriptive than explanatorily, and additional cross-linguistic research is needed to further understand the manner requirement of causative verbs in Daakaka and other languages of the Oceanic family (e.g. Moyse-Faurie 2015, Næss 2012, Thieberger 2006). This also applies to the typology of verb- and satellite-framed languages, as discussed above, more generally.

Finally, this thesis has shown that the language specific properties of root classes have a direct influence on the properties of resultative constructions in the respective languages. In Samoan and Daakaka, manner and causative verbs both require the presence of an (agentive) external argument and cannot appear in anti-causative or anti-agentive contexts, such as in English or Mandarin, respectively (Martin et al. 2020, Embick 2009). This extends to resultative constructions, in that English and Mandarin exhibit intransitive resultatives based on the anticausative (591)a or anti-agentive verb forms (591)b, whereas Samoan and Daakaka lack intransitive resultatives altogether (see section 3.1.3).

(591) a. *The egg broke open.*

b. *Shàngyī xǐ-gānjìng le.* MANDARIN
coat wash-clean PFV
'The coat is washed-clean.' (Martin et al. 2020: 55)

Therefore, I argue that cross-linguistic variation in the resultative domain can be modelled in terms of the interaction of language specific properties of argument and event structure, e.g. the morphosyntactic size of the meaning components, and idiosyncratic constraints on root classes, e.g. the requirement of agentive external argument. In contrast, the general underlying syntactic configuration of manner and result meaning components within the *v*P are expected to be the source of causative/resultative semantics across languages. This predicts that languages do not exhibit morphosyntactic or semantic properties that are specific to resultative construction and are not found elsewhere in the grammar of the respective language (cf. Williams 2015, 2014, 2012). The benefits of the analysis proposed in this thesis are that resultative meaning can be derived from (potentially) universal principles of argument and event structure composition, which are constrained by language specific variation on the morphosyntactic and semantic level. Consequently, the investigation of resultatives requires a careful examination of the morphosyntactic and semantic features of a given language, with the implication that an analysis that has been developed for one language does not easily extend to even closely related languages. In this vein, more detailed studies of resultative constructions will contribute to our understanding of cross-linguistic variation within the verbal domain.

References

Aboh, Enoch O. 2018. What if your roots are polyfunctional? The lexical entry problem in Benue-Kwa. In Oluseye Adesola, Akinbiyi Akinlabi & Olanike O. Orie (eds.), *Data-rich linguistics: Papers in honor of Yiwola Awoyale*, 83-116. Newcastle: Cambridge Scholars Publishers.

Aboh, Enoch O. 2015a. *The emergence of hybrid grammars: Language contact and change*. Cambridge: Cambridge University Press.

Aboh, Enoch O. 2015b. Functional verbs in Gungbe: The case of inherent complement verbs. *Linguística Revista de Estudos Linguísticos da Universidade do Porto* 10, 9-29.

Aboh, Enoch O. 2009. Clause structure and verb series. *Linguistic Inquiry* 40(1), 1-33.

Acedo-Matellan, Víctor. 2016. *The morphosyntax of transitions: A case study in Latin and other languages*. Oxford: Oxford University Press.

Acquaviva, Paolo. 2009. Roots and lexicality in Distributed Morphology. In Alexandra Galani, Daniel Redinger & Norman Yeo (eds.), *York-Essex Morphology Meeting 5: Special Issue of York Working Papers in Linguistics*, 1-21. York: University of York, Department of Language and Linguistic Science.

Aikhenvald, Alexandra Y. 2018. *Serial verbs*. Oxford: Oxford University Press.

Aikhenvald, Alexandra Y. 1999. Serial constructions and verb compounding: Evidence from Tariana (North Arawak). *Studies in Language* 23(2), 469-497.

Aikhenvald, Alexandra Y. & Pieter Muysken. 2011. *Multi-verb constructions: A view from the Americas*. Leiden: Brill.

Aissen, Judith L. 2003. Differential object marking: Iconicity vs. economy. *Natural Language & Linguistic Theory* 21(3), 435-483.

Akkuş, Faruk. to appear. Variable embedded agent in Sason Arabic. *Journal of Linguistics*,

Alderete, John & Mark Bradshaw. 2013. Samoan root phonotactics: Digging deeper into the data. *Linguistic Discovery* 11(1), 1-21.

Aldridge, Edith. 2004. *Ergativity and word order in Austronesian languages*. PhD thesis, Cornell University, Ithaca, NY.

Aldridge, Edith. 2002. Nominalization and wh-movement in Seediq and Tagalog. *Language and Linguistics* 3(2), 393-427.

Alexeyenko, Sascha. 2015. *The syntax and semantics of manner modification: Adjectives and adverbs*. PhD thesis, University of Osnabrück.

Alexiadou, Artemis. 2017. On the complex relationship between deverbal compounds and argument supporting nominals. In Maria Bloch-Trojnar & Anna Malicka-Kleparska (eds.), *Aspect and valency in nominals*, 53-82. Berlin: Mouton de Gruyter.

Alexiadou, Artemis. 2014. The problem with internally caused change-of-state verbs. *Linguistics* 52(4), 879-910.

Alexiadou, Artemis. 2013. Nominal vs. verbal *-ing* constructions and the development of the English progressive. *English Linguistics Research* 2(2), 126-140.

Alexiadou, Artemis. 2003. Some notes on the structure of alienable and inalienable possessors. In Martine Coene & Yves D'hulst (eds.), *From NP to DP*, vol. 2, 167-188. Amsterdam: John Benjamins.

Alexiadou, Artemis. 2001. *Functional structure in nominals: Nominalization and ergativity*. Amsterdam: John Benjamins.

Alexiadou, Artemis. 1997. *Adverb placement: A case study in antisymmetric syntax*. Amsterdam: John Benjamins

Alexiadou, Artemis & Elena Anagnostopoulou. 2019. Experiencers and causation. Ms., Humboldt-University of Berlin & University of Crete.

Alexiadou, Artemis & Elena Anagnostopoulou. 2013. Manner vs. result complementarity in verbal alternations: A view from the clear-alternation. *Proceedings of the 42nd Annual Meeting of North East Linguistic Society (NELS42/2)*, 39–52.

Alexiadou, Artemis & Terje Lohndal. 2011. The syntax and semantics of roots. Ms., University of Stuttgart & University of Maryland, College Park, MD.

Alexiadou, Artemis & Florian Schäfer. 2011. *There*-insertation: An unaccusativity mismatch at the syntax-semantics interface. *Online Proceedings of the 28th West Coast Conference on Formal Linguistics (WCCFL28)*, 1-9.

Alexiadou, Artemis & Elena Anagnostopoulou. 2009. Agent, causer and instrument PPs in Greek: Implications for verbal structure. *MIT Working Papers in Linguistics* 57, 1-16.

Alexiadou, Artemis, Fabienne Martin & Florian Schäfer. 2017. Optionally causative manner verbs: When implied results get entailed. Paper presented at Roots V, Queen Mary University of London & University College London.

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2015. *External arguments in transitivity alternations: A layering approach*. Oxford: Oxford University Press.

Alexiadou, Artemis, Florian Schäfer & Giorgos Spathas. 2014a. Delimiting Voice in Germanic: On object drop and naturally reflexive verbs. *Proceedings of the 44th Annual Meeting of the North East Linguistic Society (NELS44/1)*, 1-14.

Alexiadou, Artemis, Elena Anagnostopoulou & Christina Sevdali. 2014b. Opaque and transparent datives, and how they behave in passives. *Journal of Comparative Germanic Linguistics* 17(1), 1-34.

Alexiadou, Artemis, Gianina Iordăchioaia & Florian Schäfer. 2011. Scaling the variation in Romance and Germanic nominalizations. In Antonia P. Sleeman & Harry Perridon (eds.), *The noun phrase in Romance and Germanic*, 25-40. Amsterdam: John Benjamins.

Alexiadou, Artemis, Gianina Iordăchioaia & Elena Soare. 2010. Number/aspect interactions in the syntax of nominalizations: A Distributed Morphology approach. *Journal of Linguistics* 46(3), 537-574.

Alexiadou, Artemis, Liliane Haegeman & Melita Stavrou. 2007. *Noun phrase in the generative perspective*. Berlin: Mouton de Gruyter.

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2006. The properties of anticausatives cross-linguistically. In Mara Frascarelli (ed.), *Phases of interpretation* (Studies in Generative Grammar 91), 187-211. Berlin: Mouton de Gruyter.

Allen, Margaret. 1979. *Morphological investigations*. PhD thesis, University of Connecticut, Stotts, CT.

Alofaituli, Brian. 2011. *Language development curriculum within the Samoan congregational churches in the diaspora.* MA thesis, University of Hawai'i at Manoa, Honolulu, HI.

Ambati, Bharat Ram & Galumalemana Alfred Hunkin. 2018. SamoanWaC corpus. Sketch Engine. https://www.sketchengine.eu/samoanwac-corpus/ <Accessed 31.10.2018>.

Ameka, Felix K. & James Essegbey. 2013. Serialising languages: Satellite-framed, verb-framed or neither. *Ghana Journal of Linguistics* 2(1), 19-38.

Anagnostopoulou, Elena. 2017. Voice, manners, and results in adjectival passives. In Roberta D'Alessandro, Irene Franco & Angel J. Gallego (eds.), *The verbal domain*, 105-128. Oxford: Oxford University Press.

Angsongna, Alexander. 2019. Dàgáárè complex constructions: Serial verb constructions, multi-aspectual constructions and coordination. *Journal of African Languages and Linguistics* 40(2), 205-234.

Anscombe, Gertrude E. M. 1957. *Intention*. Oxford: Blackwell.

Aoyagi, Hiroshi. 2006. On the predicate focus construction in Korean and Japanese. *Harvard Studies in Korean Linguistics 11*, 359-373.

Apresjan, Juri D. 2000. *Systematic lexicography*. Oxford: Oxford University Press.

Arad, Maya. 2005. *Roots and patterns: Hebrew morpho-syntax*. Dordrecht: Springer.

Arad, Maya. 2003. Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs. *Natural Language & Linguistic Theory* 21(4), 737-778.

Arkadiev, Peter & Alexander Letuchiy. 2009. The syntax and semantics of event structure and Adyghe causatives. Ms., Russian Academy of Sciences, Moscow.

Armstrong, Grant. 2016. Spanish unspecified objects as null incorporated nouns. *Probus* 28(2), 165-229.

Arregi, Karlos & Asia Pietraszko. 2020. The ups and downs of head displacement. *Linguistic Inquiry*. doi: 10.1162/ling_a_00377

Arregi, Karlos & Andrew Nevins. 2012. *Morphotactics: Basque auxiliaries and the structure of spell-out*. Dordrecht: Springer.

Ausensi, Josep. to appear. Deconstructing resultatives: The Unique Path Constraint revisited. *Proceedings of the 38th West Coast Conference on Formal Linguistics (WCCFL38)*.

Ausensi, Josep. 2019. Agent entailments induce manner properties: Evidence from verbs of killing. *Proceedings of the 27th Conference of the Student Organization of Linguistics in Europe (ConSOLE27)*, 118 – 134.

Awóyalé, Yiwola. 1988. *Complex predicates and verb serialization*. Cambridge, MA: MIT Center for Cognitive Science.

Backlawski Jr., Kenneth. 2018. Contrastive topic in Eastern Cham. *Berkeley Papers in Formal Linguistics* 1(1), 3, 1-17.

Baker, Brett & Mark Harvey. 2010. Complex predicate formation. In Mengistu Amberber, Brett Baker & Mark Harvey (eds.), *Complex predicates: Cross-*

linguistic perspectives on event structure, 13-47. Cambridge: Cambridge University Press.

Baker, Mark C. 2015. *Case: Its principles and its parameters*. Cambridge: Cambridge University Press.

Baker, Mark C. 2014. Pseudo noun incorporation as covert noun incorporation: Linearization and crosslinguistic variation. *Language and Linguistics* 15(1), 5-46.

Baker, Mark C. 2009. Is head movement still needed for noun incorporation? *Lingua* 119(2), 148-165.

Baker, Mark C. 1989. Object sharing and projection in serial verb constructions. *Linguistic Inquiry* 20(4), 513-553.

Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago, IL: University of Chicago Press.

Baker, Mark C. 1985. The mirror principle and morphosyntactic explanation. *Linguistic Inquiry* 16(3), 373-415.

Baker, Mark C. & William Croft. 2017. Lexical categories: Legacy, lacuna, and opportunity for functionalists and formalists. *Annual Review of Linguistics* 3(1), 179-197.

Baker, Mark C. & Osamuyimen T. Stewart. 2002. A serial verb construction without constructions. Ms., Rutgers University, New Brunswick, NJ.

Bale, Alan C. 2007. Quantifiers and verb phrases: An exploration of propositional complexity. *Natural Language & Linguistic Theory* 25(3), 447-483.

Ball, Douglas. 2017. "VP" adverbs without a VP: The syntax of adverbs in Tongan. *Proceedings of the 24th International Conference on Head-Driven Phrase Structure Grammar (HPSG24)*, 61-81.

Ball, Douglas L. 2008. *Clause structure and argument realization in Tongan*. PhD thesis, Stanford University, Stanford, CA.

Barbour, Julie. 2012. *A grammar of Neverver*. Berlin: de Gruyter Mouton.

Barrie, Michael. 2011. *Dynamic antisymmetry and the syntax of noun incorporation*. Dordrecht: Springer.

Barrie, Michael & Eric Mathieu. 2016. Noun incorporation and phrasal movement. *Natural Language & Linguistic Theory* 34(1), 1-51.

Barth, Danielle & Gregory D. S. Anderson. 2015. Directional constructions in Matukar Panau. *Oceanic Linguistics* 54(1), 206-239.

Beavers, John. 2012. Resultative constructions. In Robert Binnick (ed.), *The Oxford handbook of tense and aspect*, 908-933. Oxford: Oxford University Press.

Beavers, John. 2011. On affectedness. *Natural Language & Linguistic Theory* 29(2), 335-370.

Beavers, John. 2008. Scalar complexity and the structure of events. In Johannes Dölling, Tatjana Heyde-Zybatow & Martin Schäfer (eds.), *Event structures in linguistic form and interpretation*, 245-265. Berlin: Mouton de Gruyter.

Beavers, John & Juwon Lee. 2020. Intentionality, scalar change, and non-culmination in Korean caused change-of-state predicates. *Linguistics*. doi: 10.1515/ling-2020-007

Beavers, John & Andrew Koontz-Garboden. 2020. *The roots of verbal meaning*. Oxford: Oxford University Press.

Beavers, John & Andrew Koontz-Garboden. 2017. Result verbs, scalar change, and the typology of motion verbs. *Language* 93(4), 842-876.

Beavers, John & Andrew Koontz-Garboden. 2012. Manner and result in the roots of verbal meaning. *Linguistic Inquiry* 43(3), 331-369.

Beavers, John, Beth Levin & Shiao Wei Tham. 2010. The typology of motion expression revisited. *Journal of Linguistics* 46(2), 311-377.

Beavers, John, Michael Everdell, Kyle Jerro, Henri Kauhanen, Andrew Koontz-Garboden, Elise LeBovidge & Stephen Nichols. 2017. Two types of states: A cross-linguistic study of change-of-state verb roots. *Proceedings of the Linguistic Society of America (LSA)* 2, 38. 1-15.

Beck, Sigrid. 2005. There and back again: A semantic analysis. *Journal of Semantics* 22(1), 3-51.

Beck, Sigrid & William Snyder. 2001a. Complex predicates and goal PPs: Evidence for a semantic parameter. *Proceedings of the 25th Annual Boston University Conference on Language Development (BUCLD25/1)*, 114-122.

Beck, Sigrid & William Snyder. 2001b. The resultative parameter and restitutive *again*. In Caroline Féry & Wolfgang Sternefeld (eds.), *Audiatur vox sapientiae: A Festschrift for Arnim von Stechow*, 48-69. Berlin: Akademie Verlag.

Becker, Misha. 2014. *The acquisition of syntactic structure: Animacy and thematic alignment*. Cambridge: Cambridge University Press.

Bellingham, Erika. 2019. Integrating event descriptions in multi-predicate constructions. Paper presented at the 15th International Cognitive Linguistics Conference (ICLC15), Kwansei Gakuin University, Nishinomiya.

Bennet, Jonathan. 1994. The "namely" analysis of the "by"-locution. *Linguistics and Philosophy* 17(1), 29-51.

Berger, Mike. 2020. Transitivity matching in Saliba (Oceanic). Paper presented at the 38th West Coast Conference in Formal Linguistics (WCCFL38), University of British Columbia, Vancouver.

Bhat, D. N. Shankara. 1999. *The prominence of tense, aspect and mood*. Amsterdam: John Benjamins.

Bhatt, Rajesh & David Embick. 2017. Causative derivations in Hindi-Urdu. *Indian Linguistics* 78(1-2), 93-151.

Biggs, Alison. 2019. Objects in motion verb phrases. *Glossa* 4(1), 98, 1-31. doi: 10.5334/gjgl820.

Biggs, Alison & David Embick. 2019. Event structural properties of the English get-passive. Paper presented at the 42nd Generative Linguistics in the Old World Conference (GLOW42), University of Oslo.

Biggs, Bruce. 1971. The languages of Polynesia. In Thomas A. Sebeok (ed.), *Current trends in linguistics*, vol. 8, 466-505. The Hague: Mouton.

Bisang, Walter. 2009. Serial verb constructions. *Language and Linguistics Compass* 3(3), 792-814.

Bisang, Walter. 1986. Die Verbserialisierung im Jabêm. *Lingua* 70, 131-162.

Bittner, Maria. 1999. Concealed causatives. *Natural Language Semantics* 7, 1-78.

Blume, Kerstin. 1998. A contrastive analysis of interaction verbs with dative complements. *Linguistics* 36(2), 253-280.

Blust, Robert. 2013. *The Austronesian languages*, revised edn. Canberra: Asia Pacific Linguistics.

Bobaljik, Jonathan. 2012. *Universals in comparative morphology: Suppletion, superlatives and the structure of words*. Cambridge, MA: MIT Press.

Bobaljik, Jonathan. 1993. On ergativity and ergative unergatives. In Colin Philips (ed.), *Papers on case and agreement II*, 45-88. Cambridge, MA: MITWPL.

Bobaljik, Jonathan & Heidi Harley. 2017. Suppletion is local: Evidence from Hiaki. In Heather Newell, Máire Noonan, Glyne Piggott & Lisa D. Travis (eds.), *The structure of words at the interfaces*, 141-159. Oxford: Oxford University Press.

Boersma, Paul & David Weenink. 2014. Praat: Doing phonetics by computer, version 6.0.24. Computer program. http://www.praat.org/ <Accessed 20.10.2016>.

Bohnemeyer, Jürgen. 2015. A practical epistemology for semantic elicitation in the field and elsewhere. In M. Ryan Bochnak & Lisa Matthewson (eds.), *Methodologies in semantic fieldwork*, 13-46. Oxford: Oxford University Press.

Bohnemeyer, Jürgen. 2007. Morpholexical Transparency and the argument structure of verbs of cutting and breaking. *Cognitive Linguistics* 18(2), 153–177.

Bohnemeyer, Jürgen & Robert D. van Valin, Jr. 2017. The macro-event property and the layered structure of the clause. *Studies in Language* 41(1), 142-197.

Bohnemeyer, Jürgen, Melissa Bowerman & Penelope Brown. 2001. Cut and break clips. In Steven C. Levinson & Nick J. Enfield (eds.), *Manual for the field season 2001*, 90-96. Nijmegen: Max Planck Institute for Psycholinguistics.

Bohnemeyer, Jürgen, Nick J. Enfield, James Essegbey & Sotaro Kita. 2010. The macro-event property: The segmentation of causal chains. In Jürgen Bohnemeyer & Eric Pederson (eds.), *Event representation in language and cognition: Encoding events at the language cognition interface*. Cambridge: Cambridge University Press.

Borer, Hagit. 2013. *Taking form: Structuring sense*, vol. 3. Oxford: Oxford University Press.

Borer, Hagit. 2005a. *In name only: Structuring sense*, vol. 1. Oxford: Oxford University Press.

Borer, Hagit. 2005b. *The normal course of events: Structuring sense*, vol. 2. Oxford: Oxford University Press.

Bossong, Georg. 1991. Differential object marking in Romance and beyond. In Douglas A. Kibbee & Dieter Wanner (eds.), *New analyses in Romance linguistics*, 143-170. Amsterdam: John Benjamins.

Bradshaw, Joel. 2010a. Manner and path serialization in Numbami. In John Bowden, Nikolaus P. Himmelmann & Malcolm Ross (eds.), *A journey through Austronesian and Papuan linguistics and cultural space: Papers in honour of Andrew K. Pawley*, 441-453. Canberra: Pacific Linguistics.

Bradshaw, Joel. 2010b. Manner to light verbs in Oceanic languages in New Guinea. Paper presented at the 8th Conference on Oceanic Linguistics (COOL8), University of Auckland.

Bradshaw, Joel. 1993. Subject relationships within serial verb constructions in Numbami and Jabêm. *Oceanic Linguistics* 32(1), 133-161.

Bradshaw, Joel. 1982. *Word order change in Papua New Guinea Austronesian languages*. PhD thesis, University of Hawai'i at Manoa, Honolulu, HI.

Bril, Isabelle. 2007. Nexus and juncture types of complex predicates in Oceanic languages: Functions and semantics. *Language and Linguistics* 8(1), 267-310.

Bril, Isabelle. 2004. Complex nuclei in Oceanic languages: Contribution to an areal typology. In Isabelle Bril & Françoise Ozanne-Rivierre (eds.), *Complex predicates in Oceanic languages: Studies in the dynamics of binding and boundness*, 1-48. Berlin: Mouton de Gruyter.

Bril, Isabelle & Françoise Ozanne-Rivierre (eds.). 2004. *Complex predicates in Oceanic languages: Studies in the dynamics of binding and boundness*. Berlin: Mouton de Gruyter.

Broschart, Jürgen. 1997. Why Tongan does it differently: Categorial distinctions in a language without nouns and verbs. *Linguistic Typology* 1(2), 123-165.

Bruening, Benjamin. 2013. *By* phrases in passives and nominals. *Syntax* 16(1), 1-41.

Bücking, Sebastian. 2014. Elaborating on events by means of English *by* and German *indem*. *Empirical Issues in Syntax and Semantics* 10, 19-36.

Bugenhagen, Robert D. 1995. *A grammar of Mangap-Mbula: An Austronesian language of Papua New Guinea*. Canberra: Pacific Linguistics.

Burton, Strang & Lisa Matthewson. 2015. Targeted construction storyboards in semantic fieldwork. In M. Ryan Bochnak & Lisa Matthewson (eds.), *Methodologies in semantic fieldwork*, 135-156. Oxford: Oxford University Press.

Burzio, Luigi. 1986. *Italian syntax: A government-binding approach*. Dordrecht: Springer.

Butt, Miriam. 2010. The light verb jungle: Still hacking away. In Mengistu Amberber, Brett Baker & Mark Harvey (eds.), *Complex predicates: Cross-linguistic perspectives on event structure*, 48-78. Cambridge: Cambridge University Press.

Butt, Miriam & Wilhelm Geuder. 2001. On the (semi)lexical status of light verbs. In Norbert Corver & Henk van Riemsdijk (eds.), *Semi-lexical categories: The function of content words and the content of function words*, 323-370. Berlin: Mouton de Gruyter.

Butz, Benedikt. 2017. *Daakaka vowel length and duration*. Master thesis, Humboldt-University of Berlin.

Calhoun, Sasha. 2017. Exclusives, equatives and prosodic phrases in Samoan. *Glossa* 2(1), 11, 1-43. doi: 10.5334/gjgl.196

Calhoun, Sasha. 2015. The interaction of prosody and syntax in Samoan focus marking. *Lingua* 165(B), 205-229.

Calhoun, Sasha, Emma Wollum & Emma Kruse Va'ai. 2019. Prosodic prominence and focus: Expectation affects interpretation in Samoan and English. *Language and Speech*, OnlineFirst. doi: 10.1177/0023830919890362

Carnie, Andrew. 2012. *Syntax: A generative introduction*, 3rd edn. Malden, MA: Wiley-Blackwell.

Carrier, J & J. H. Randall. 1992. The argument structure and syntactic structure of resultatives. *Linguistic Inquiry* 28, 461-497.

Carstairs-McCarthy, Andrew. 1992. *Current morphology*. London: Routledge.

Carstens, Vicki. 2002. Antisymmetry and word order in serial constructions. *Language* 78(1), 3-50.

Carvalho, Janayna. 2016. What causes the alternation of agentive verbs in Brazilian Portuguese? *University of Pennsylvania Working Papers in Linguistics* 22(1), 61-70.

Cauchard, Aurélie. 2018. *Spatial expression in Caac: An Oceanic language spoken in the North of New Caledonia*. Boston, MA: de Gruyter Mouton.

Census Bureau, United States. 2015. Detailed languages spoken at home and ability to speak English for the population 5 years and over: 2009-2013. https://www.census.gov/data/tables/2013/demo/2009-2013-lang-tables.html <Accessed 04.12.2019>.

Chambers, Mary R. 2009. *Which way is up? Motion verbs and paths of motion in Kubokota, an Austronesian language of the Solomon Islands*. PhD thesis, University of London.

Chaves, Rui P. 2012. Conjunction, cumulation and respectively readings. *Journal of Linguistics* 48(2), 297-344.

Chierchia, Gennaro. 2004. A semantics for unaccusatives and its syntactic consequences. In Artemis Alexiadou, Elena Anagnostopoulou & Martin Everaert (eds.), *The unaccusativity puzzle: Explorations at the syntax-lexicon interface*, 22-59. Oxford: Oxford University Press.

Choi, Jaehoon & Heidi Harley. 2019. Locality domains and morphological rules: Phases, heads, node-sprouting and suppletion in Korean honorification. *Natural Language & Linguistic Theory* 37(4), 1319-1365.

Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos P. Otero & Maria L. Zubizarreta (eds.), *Foundational issues in linguistic theory*, 133-166. Cambridge, MA: MIT Press.

Chomsky, Noam. 2004. Beyond explanatory adequacy. In Adriana Belletti (ed.), *Structures and beyond: The cartography of syntactic structures*, vol. 3, 104-131. Oxford: Oxford University Press.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 1-52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000. Minimalist inquires: The framework. In Roger A. Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89-155. Cambridge, MA: MIT Press.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

Chung, Sandra. 2012. Are lexical categories universal? The view from Chamorro. *Theoretical Linguistics* 38(1-2), 1-56.

Chung, Sandra. 1978. *Case marking and grammatical relations in Polynesian*. Austin, TX: University of Texas Press.

Chung, Sandra. 1972. On conjunct splitting in Samoan. *Linguistic Inquiry* 3(4), 510-516.

Chung, Sandra & William A. Ladusaw. 2004. *Restriction and saturation*. Cambridge, MA: MIT Press.

Chung, Sandra, William A. Ladusaw & James McCloskey. 1995. Sluecing and logical form. *Natural Language Semantics* 3, 1-44.

Churchward, Clerk M. 1953. *Tongan grammar*. London: Oxford University Press.

Churchward, Clerk M. 1940. *Rotuman grammar and dictionary*. Sydney: Methodist Church of Australia.

Churchward, Spencer. 1926. *A new Samoan grammar*. Melbourne: Spectator.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press on Demand.

Clark, David. 2009. **Leo tuai: A comparative lexical study of North and Central Vanuatu languages*. Canberra: Pacific Linguistics.

Clark, Eve & Kathie L. Carpenter. 1989. The notion of source in language acquisition. *Language* 65(1), 1-30.

Clark, Ross. 1969. Some verbless sentences in Samoan. *Oceanic Linguistics* 8(2), 105-119.

Cleary-Kemp, Jessica. 2015. *Serial verb constructions revisited: A case study from Koro*. PhD thesis, University of California, Berkeley, CA.

Clemens, Lauren E. 2014. *Prosodic noun incorporation and verb initial syntax*. PhD thesis, Harvard University, Cambridge, MA.

Clemens, Lauren E. & Rebecca Tollan. to appear. Syntactic ergativity as a processing-based constraint against crossing dependencies. In Lauren E. Clemens & Diane Massam (eds.), *Polynesian syntax and its interfaces*. Oxford: Oxford University Press.

Cole, Douglas J. 2016. *Lao serial verb constructions and their event representations*. PhD thesis, University of Iowa, IA.

Collins, Chris. 2002. Multiple verb movement in ǂHoan. *Linguistic Inquiry* 33(1), 1-29.

Collins, Chris. 1997. Argument sharing in serial verb constructions. *Linguistic Inquiry* 28(3), 461-497.

Collins, James N. to appear. Mapping meanings to argument structure: The semantics of Samoan case. In Diane Massam & Lauren E. Clemens (eds.), *Polynesian syntax and its interfaces*. Oxford: Oxford University Press.

Collins, James N. 2017. Samoan predicate initial word order and object positions. *Natural Language & Linguistic Theory* 35(1), 1-59.

Collins, James N. 2010. *Syntactic derivations of Samoan predicates*. Bachelor thesis, University of Sydney.

Comrie, Bernard. 1976. *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge: Cambridge University Press.

Condoravdi, Cleo. 1989. The middle: Where semantics and morphology meet. *MIT Working Papers in Linguistics* 11, 16-30.

Cook, Kenneth W. 1996. The cia suffix as a passive marker in Samoan. *Oceanic Linguistics* 35(1), 57-76.

Cook, Kenneth W. 1994. The empathy hierarchy and Samoan clitic pronouns. *Cognitive Linguistics* 5(1), 57-75.

Cook, Kenneth W. 1993. A cognitive account of Samoan case marking and cliticization. *Studi Italiani di Linguistica Teorica e Applicata* 22, 509–530.

Cook, Kenneth W. 1988. *A cognitive analysis of grammatical relations, case, and transitivity in Samoan*. PhD thesis, University of California, San Diego, CA.

Coon, Jessica. 2019. Building verbs in Chuj: Consequences for the nature of roots. *Journal of Linguistics* 55(1), 35-81.

Coon, Jessica. 2013. *Aspects of split-ergativity*. Oxford: Oxford University Press.

Coon, Jessica & Omer Preminger. 2017. Split ergativity is not about ergativity. In Jessica Coon, Diane Massam & Lisa D. Travis (eds.), *Oxford handbook of ergativity*, 226-252. Oxford: Oxford University Press.

Coon, Jessica, Pedro Mateo Pedro & Omer Preminger. 2014. The role of case in A-bar extraction asymmetries: Evidence from Mayan. *Linguistic Variation* 14(2), 179-242.

Copley, Bridget & Heidi Harley. 2015. A force-theoretic framework for event structure. *Linguistics and Philosophy* 38(2), 103-158.

Corbett, Greville G. 2013. Number of genders. In Matthew S. Dryer & Martin Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.

Corbett, Greville G. 2006. *Agreement*. Cambridge: Cambridge University Press.

Croft, William. 2001. *Radical construction grammar: Syntactic theory in typological perspective*. Oxford: Oxford University Press.

Croft, William. 1991. *Syntactic categories and grammatical relations: The cognitive organization of information*. Chicago, IL: University of Chicago Press.

Croft, William, Jóhanna Barðdal, Willem Hollmann, Violeta Sotirova & Taoka Chiaki. 2010. Revising Talmy's typological classification of complex event constructions. In Hans Boas (ed.), *Contrastive studies in construction grammar*, 201-236. Amsterdam: John Benjamins.

Crowley, Terry. 2002. *Serial verbs in Oceanic: A descriptive typology*. Oxford: Oxford University Press.

Crowley, Terry. 1987. Serial verbs in Paamese. *Studies in Language* 11(1), 35-84.

Cruse, Alan D. 1973. Some thoughts on agentivity. *Journal of Linguistics* 9(1), 11-23.

Culicover, Peter & Ray Jackendoff. 2005. *Simpler syntax*. Oxford: Oxford University Press.

Danlos, Laurence. 2001. Event coreference in causal discourses. In Pierrette Bouillon & Federica Busa (eds.), *The language of word meaning*, 216-242. Cambridge: Cambridge University Press.

Danon, Gabi. 2011. Agreement and DP-internal feature distribution. *Syntax* 14, 297-317.

Davidson, Donald. 1969. The individuation of events. In Nicholas Rescher (ed.), *Essays in honor of Carl G. Hempel*, 216-234. Dordrecht: Reidel.

Davidson, Donald. 1963. Actions, reasons and causes. *Journal of Philosophy* 60(23), 685-700.

Davis, Karen. 2003. *A grammar of the Hoava language, Western Solomons*. Canberra: Pacific Linguistics.

Dayal, Veeneta. 2003. A semantics for pseudo incorporation. Ms., Rutgers University, New Brunswick, NJ.

De Belder, Marijke. 2017. The root and nothing but the root: Primary compounds in Dutch. *Syntax* 20(2), 138-169.

de Vos, Mark A. 2005. *The syntax of pseudo-coordination in English and Afrikaans*. Utrecht: LOT Publications.

Deal, Amy Rose. 2017. Syntactic ergativity as case discrimination. *Proceedings of the 34th Meeting of the West Coast Conference on Formal Linguistics (WCCFL34)*, 141-150.

Deal, Amy Rose. 2010. Ergative case and the transitive subject: A view from Nez Perce. *Natural Language & Linguistic Theory* 28(1), 73-120.

Déchaine, Rose-Marie Anne. 1993. *Predicates across categories: Towards a category-neutral syntax*. PhD thesis, University of Massachusetts Amherst, MA.

Dell, Francois. 1983/1984. An aspectual distinction in Tagalog. *Oceanic Linguistics* 22-23(1-2), 175-206.

Denniss, Jessica. 2019. Ngarinyman resultatives. Paper presented at the 42nd Generative Linguistics in the Old World Conference (GLOW42), University of Oslo.

Dhillon, Paul, Karl S. Lee & Diane Massam. 2009. Resulting states in Niuean. *Toronto Working Papers in Linguistics* 31, 1-8.

Dimock, Laura G. 2009. *A grammar of Navahaq (Malakula, Vanuatu)*. PhD thesis, Victoria University of Wellington.

Don, Jan & Eva van Lier. 2013. Derivation and categorization in flexible and differentiated languages. In Jan Rijkhoff & Eva van Lier (eds.), *Flexible word classes: Typological studies of underspecified parts-of-speech*, 56-88. Oxford: Oxford University Press.

Doner, Julianne. 2019. *The EPP across languages*. PhD thesis, University of Toronto.

Donohue, Cathryn & Mark Donohue. 2010. The case of possessors and subjects. In Raphael Mercado, Eric Potsdam & Lisa D. Travis (eds.), *Austronesian and theoretical linguistics*, 103-116. Amsterdam: John Benjamins.

Downs, Evelyn A. 1949. *Everyday Samoan: Samoan grammar*, 2nd edn. Devonport: North Shore Gazette.

Dowty, David. 1991. Thematic proto-roles and argument selection. *Language* 67(3), 547-619.

Dowty, David. 1979. *Word meaning and Montague grammar: The semantics of verbs and times in generative semantics and in Montague's PTQ*. Dordrecht: Reidel.

Duranti, Alessandro & Elinor Ochs. 1990. Genitive constructions and agency in Samoan discourse. *Studies in Language* 14(1), 1-23.

Durie, Mark. 1997. Grammatical structures in verb serialization. In Alex Alsina, Joan Bresnan & Peter Sells (eds.), *Complex predicates*, 289-354. Stanford, CA: CSLI Publications.

Dvořáková, Věra. 2017. *Generic and indefinite null objects*. PhD thesis, Rutgers University, New Brunswick, NJ.

Early, Robert. 1993. Nuclear layer serialization in Lewo. *Oceanic Linguistics* 32(1), 65-93.

Eckardt, Regine. 1998. *Adverbs, events and other things: Issues in the semantics of manner adverbs*. Tübingen: Niemeyer.

Eik, Ragnhild. 2019. *The morphosyntax of compounding in Norwegian*. PhD thesis, Norwegian University of Science and Technology, Trondheim.

Embick, David. 2015. *The morpheme: A theoretical introduction*. Berlin: de Gruyter Mouton.

Embick, David. 2010. *Localism versus globalism in morphology and phonology* (Linguistic Inquiry Monograph 60). Cambridge, MA: MIT Press.

Embick, David. 2009. Roots, states, and stative passives. Paper presented at Roots Workshop, University of Stuttgart.

Embick, David. 2004. On the structure of resultative participles in English. *Linguistic Inquiry* 35(3), 355-392.

Embick, David & Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32(4), 555-595.

Ernst, Thomas. 2002. *The syntax of adjuncts*. Cambridge: Cambridge University Press.

Ethnologue. 2019a. Austronesian. https://www.ethnologue.com/subgroups/austronesian <Accessed 18.10.2019>.

Ethnologue. 2019b. Fijian. https://www.ethnologue.com/language/FIJ <Accessed 04.12.2019>.

Ethnologue. 2019c. Samoan. https://www.ethnologue.com/language/smo <Accessed 04.12.2019>.

Evans, Bethwyn. 2003. *A study of valency-changing devices in Proto Oceanic*. Canberra: Pacific Linguistics.

Ezard, Bryan. 1997. *A grammar of Tawala: An Austronesian language of Milne Bay area, Papua New Guinea*. Canberra: Pacific Linguistics.

Ezard, Bryan. 1978. Classificatory prefixes of the Massim cluster. In Stephen A. Wurm & Lois Carrington (eds.), *Proceedings of the 2nd International Conference on Austronesian Linguistics (ICAL2)*, 1159-1180. Canberra: Australian National University.

Fábregas, Antonio. 2007. An exhaustive lexicalisation account of directional complements. *Nordlyd: Tromsø Working Papers on Language and Linguistics* 34(2), 165-199.

Fabricius-Hansen, Cathrine. 2006. "We congratulate by...". In Torgrim Solstad, Atle Grønn & Dag Haug (eds.), *A Festschrift for Kjell Johan Sæbø: In partial fulfilment of the celebration of his 50th birthday*, 45-57. Oslo: University of Oslo.

Fabricius-Hansen, Cathrine. 2001. Wi(e)der and again(st). In Caroline Féry & Wolfgang Sternefeld (eds.), *Audiatur vox sapientiae: A Festschrift for Arnim von Stechow*, 101-130. Berlin: Akademie Verlag.

Fanselow, Gisbert & Damir Cavar. 2001. Remarks on the economy of pronunciation. In Gereon Müller & Wolfgang Sternefeld (eds.), *Competition in syntax*, 107-150. Berlin: Mouton de Gruyter.

Filip, Hana. 2008. Events and maximalization: The case of telicity and perfectivity. In Susan Rothstein (ed.), *Theoretical and cross-linguistic approaches to the semantics of aspect*, 217-256. Amsterdam: John Benjamins.

Filip, Hana & Susan Rothstein. 2006. Telicity as a semantic parameter. In James Lavine, Steven Franks, Mila Tasseva-Kurktchieva & Hana Filip (eds.), *Annual Workshop on Formal Approaches to Slavic Linguistics (FASL): The Princeton Meeting 2005*, 139-156. Ann Arbor, MI: University of Michigan Slavic Publications.

Fillmore, Charles J. 1970. The grammar of hitting and breaking. In Roderick A. Jacobs & Peter S. Rosenbaum (eds.), *Readings in English transformational grammar*, 120-133. Waltham, MA: Ginn.

Fodor, Jerry. 1970. Three reasons for not deriving *kill* from *cause to die*. *Linguistic Inquiry* 1(4), 429-438.

Foley, William & Mike Olson. 1985. Clausehood and serialization. In Johanna Nichols & Anthony C. Woodbury (eds.), *Grammar inside and outside the clause: Some approaches to theory from the field*, 17-60. Cambridge: Cambridge University Press.

Folli, Raffaella. 2002. *Constructing telicity in English and Italian*. PhD thesis, University of Oxford.

Folli, Raffaella & Heidi Harley. 2019. A head movement approach to Talmy's typology. *Linguistic Inquiry* (Early Access), 1-46.

Folli, Raffaella & Heidi Harley. 2007. Causation, obligation and argument structure: On the nature of little *v*. *Linguistic Inquiry* 38(2), 197-238.

Folli, Raffaella & Gilian Ramchand. 2006. Prepositions and results in Italian and English: An analysis from event decomposition. In Henk J. Verkuyl, Henriëtte de Swart & Angeliek van Hout (eds.), *Perspectives on aspect*, 81-105. Dordrecht: Springer.

Folli, Raffaella & Heidi Harley. 2005. Flavors of *v*: Consuming results in Italian & English. In Paula Kempchinsky & Roumyana Slabakova (eds.), *Aspectual inquiries*, 95-120. Dordrecht: Springer.

Folli, Raffaella, Heidi Harley & Simin Karimi. 2005. Determinants of event type in Persian complex predicates. *Lingua* 115(10), 1365-1401.

Francez, Itamar & Andrew Koontz-Garboden. 2017. *Semantics and morphosyntactic variation: Qualities and the grammar of property concepts*. Oxford: Oxford University Press.

François, Alexandre. 2017. The economy of word classes in Hiw, Vanuatu. *Studies in Language* 41(2), 294-357.

François, Alexandre. 2006. Serial verb constructions in Mwotlap. In Alexandra Y. Aikhenvald & Robert M. W. Dixon (eds.), *Serial verb constructions: A cross-linguistic typology*, 223-238. Oxford: Oxford University Press.

François, Alexandre. 2004. Chains of freedom: Constraints and creativity in the macro-verb strategies of Mwotlap (Vanuatu). In Isabelle Bril & Françoise Ozanne-Rivierre (eds.), *Complex predicates in Oceanic languages: Studies in the dynamics of binding and boundness*, 107-144. Berlin: Mouton de Gruyter.

François, Alexandre, Michael J. Franjieh, Sébastien Lacrampe & Stefan Schnell. 2015. The exceptional linguistic density of Vanuatu. In Alexandre François, Sébastien Lacrampe, Michael J. Franjieh & Stefan Schnell (eds.), *The languages of Vanuatu: Unity and diversity*, 1-21. Canberra: Asia-Pacific Linguistics.

Franjieh, Michael J. 2012. *Possessive classifiers in North Ambrym, a language of Vanuatu: Explorations in semantic classification*. PhD thesis, SOAS, University of London.

Frostad, Benedicte Haraldstad. 2012. *A grammar of Ughele: An Oceanic language of Solomon Islands*. Utrecht: LOT Publications.

Fuß, Eric. 2005. *The rise of agreement: A formal approach to syntax and grammaticalization of verbal inflection*. Amsterdam: John Benjamins.

Gast, Volker, Ekkehard König & Claire Moyse-Faurie. 2014. Comparative lexicology and the typology of event descriptions: A programmatic study. In Doris Gerland, Christian Horn, Anja Latrouite & Albert Ortmann (eds.), *Meaning and grammar of nouns and verbs*, 145-183. Düsseldorf: Düsseldorf University Press.

Gehrke, Berit. 2008. *Ps in motion: On the semantics and syntax of P elements and motion events*. PhD thesis, University of Utrecht.

Ginet, Carl. 1990. *On action*. Cambridge: Cambridge University Press.

Givón, Talmy. 1991. Some substantive issues concerning verb serialization: Grammatical vs. cognitive packaging. In Claire Lefebvre (ed.), *Serial verbs: Grammatical, comparative and cognitive approaches*, 137-184. Amsterdam: John Benjamins.

Givón, Talmy. 1975. Serial verbs and syntactic change: Niger-Congo. In Charles N. Li (ed.), *Word order and word order change*, 47-112. Austin, TX: University of Texas Press.

Goldberg, Adele. 2010. Verbs, constructions and semantic frames. In Edit Doron, Malka Rappaport Hovav & Ivy Sichel (eds.), *Lexical semantics, syntax and event structure*, 39-58. Oxford: Oxford University Press.

Goldberg, Adele. 2001. Patient arguments of causative verbs can be omitted: The role of information structure in argument distribution. *Language Sciences* 23(4-5), 503-524.

Goldberg, Adele. 1995. *Constructions: A construction grammar approach to argument structure*. Chicago, IL: University of Chicago Press.

Goldberg, Adele. 1991. It can't go down the chimney up: Path and the English resultative. *Proceedings of the 17th Annual Meeting of the Berkeley Linguistics Society (BLS17)*, 368-378.

Goldberg, Adele & Ray Jackendoff. 2004. The English resultative as a family of constructions. *Language* 80(3), 532-568.

Goldman, Alvin I. 1970. *A theory of human action*. Englewood, NJ: Prentice-Hall.

Goldschmidt, Anja. 2018. *Hitting playfully but hard: Conceptual effects of verb-adverb modification in the domain of force*. PhD thesis, University of Utrecht.

Gould, Isaac, Diane Massam & Philip Patchin. 2009. Faka-Niue: Understanding cause in Niuean. *Toronto Working Papers in Linguistics* 31, 1-21.

Gramatke, Astrid. 2019. *Monte Desann: Serial verb constructions in Kreol Seselwa*. PhD thesis, University of Cologne.

Gray, Russel D., Alexei J. Drummond & Simon J. Greenhill. 2009. Language phylogenies reveal expansion pulses and pauses in Pacific settlement. *Science* 323(5913), 479-483.

Green, Georgia. 1972. Some observations on the syntax and semantics of instrumental verbs. *Papers from the 8th Regional Meeting of the Chicago Linguistics Society (CLS8)* 8, 83-97.

Grimshaw, Jane. 2000. Locality and extended projection. In Peter Coopmans, Martin Everaert & Jane Grimshaw (eds.), *Lexical specification and insertion*, 115-134. Amsterdam: John Benjamins.

Grimshaw, Jane. 1990. *Argument structure*. Cambridge, MA: MIT Press.

Guerssel, Mohamed, Kenneth Hale, Mary Laughren, Beth Levin & Josie White Eagle. 1985. A cross-linguistic study of transitivity alternations. In William H. Eilfort, Paul D. Kroeber & Karen L. Peterson (eds.), *Papers from the Parasession on Causatives and Agentivity at the 21st Regional Meeting of the Chicago Linguistic Society (CLS)*, 48-63. Chicago, IL: CLS.

Hagemeijer, Tjerk. 2001. Underspecification in serial verb constructions. In Norbert Corver & Henk van Riemsdijk (eds.), *Semi-lexical categories: The function of content words and the content of function words*, 415-451. Berlin: Mouton de Gruyter.

Haider, Hubert. 2016. On predicting resultative constructions. Ms., University of Salzburg.

Haji-Abdolhosseini, Mohammad, Diane Massam & Kenji Oda. 2002. Number and events: Verbal reduplication in Niuean. *Oceanic Linguistics* 41(2), 475-492.

Hale, Kenneth & Samuel J. Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In Kenneth Hale & Samuel J. Keyser (eds.), *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger*, 53-108. Cambridge, MA: MIT Press.

Halle, Morris & Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In Kenneth Hale & Samuel J. Keyser (eds.), *The view from building 20: Essays in linguistics in the honor of Sylvain Bromberger*, 111-176. Cambridge, MA: MIT Press.

Halliday, M. A. K. 1967. Notes on transitivity and theme in English. *Journal of Linguistics* 3(1), 37-81.

Halpert, Claire. 2015. *Argument licensing and agreement*. Oxford: Oxford University Press.

Hamel, Patricia J. 1993. Serial verbs in Loniu and an evolving preposition. *Oceanic Linguistics* 32(1), 111-132.

Han, Chung-hye, Jeffrey Lidz & Julien Musolino. 2007. V-raising and grammar competition in Korean: Evidence from negation and quantifier scope. *Linguistic Inquiry* 38(1), 1-47.

Hardt, Daniel. 1993. *Verb phrase ellipsis: Form, meaning and processing.* PhD thesis, University of Pennsylvania, Philadelphia, PA.

Harðarson, Gísli R. 2017. *Cycling through grammar: On compounds, noun phrases and domains*. PhD thesis, University of Connecticut, Storrs, CT.

Harley, Heidi. 2017. The "bundling" hypothesis and the disparate functions of little v. In Roberta D'Alessandro, Irene Franco & Angel J. Gallego (eds.), *The verbal domain*, 3-28. Oxford: Oxford University Press.

Harley, Heidi. 2013. External arguments and the mirror principle: On the distinctness of voice and v. *Lingua* 125, 34-57.

Harley, Heidi. 2010. Affixation and the mirror principle. In Raffaella Folli & Christiane Ullbricht (eds.), *Interfaces in linguistics*, 166-186. Oxford: Oxford University Press.

Harley, Heidi. 2008. On the causative construction. In Shigeru Miyagawa & Mamoru Saito (eds.), *Oxford handbook of Japanese linguistics*, 20-53. Oxford: Oxford University Press.

Harley, Heidi. 2005. How do verbs get their names? Denominal verbs, manner incorporation and the ontology of verb roots in English. In Nomi Erteschik-Shir & Tova Rapoport (eds.), *The syntax of aspect*, 42-64. Oxford: Oxford University Press.

Harley, Heidi & Jason Haugen. 2007. Are there really two different classes of instrumental denominal verbs in English? *Snippets* 16, 9-10.

Harley, Heidi & Rolf Noyer. 2000. Formal vs. encyclopedic properties of vocabulary: Evidence from nominalizations. In Bert Peeters (ed.), *The lexicon-encyclopedia interface*, 349-374. Amsterdam: Elsevier.

Harley, Heidi & Rolf Noyer. 1999. State-of-the-article: Distributed Morphology. *Glot International* 4(4), 3-8.

Harley, Heidi, Mercedes Tubino Blanco & Jason D. Haugen. 2017. Locality conditions on suppletive verbs in Hiaki. In Vera Gribanova & Stephanie S. Shih (eds.), *The morphosyntax-phonology connection: Locality and directionality at the interface*, 91-112. Oxford: Oxford University Press.

Haspelmath, Martin. 2016. The serial verb construction: Comparative concept and cross-linguistic generalizations. *Language and Linguistics* 17(3), 291-319.

Haspelmath, Martin. 1993. More on the typology of inchoative/causative verb alternations. In Bernard Comrie & Maria Polinsky (eds.), *Causatives and transitivity*, 87-121. Amsterdam: John Benjamins.

Haugen, Jason. 2016. Readjustment: Rejected? In Daniel Siddiqi & Heidi Harley, *Morphological metatheory*, 303-342. Amsterdam: John Benjamins.

Haugen, Jason. 2011. Reduplication in Distributed Morphology. *Coyote Papers: Working Papers in Linguistics, Linguistic Theory at the University of Arizona* 18, 1-27.

Haugen, Jason & Daniel Siddiqi. 2016. Towards a restricted realization theory: Multimorphemic monolistemicity, portmanteaux and post-linearization spanning. In Daniel Siddiqi & Heidi Harley (eds.), *Morphological metatheory*, 343-386. Amsterdam: John Benjamins.

Healey, David S. 2013. *A grammar of Maskelynes: The language of Uluveu Island, Vanuatu*. PhD thesis, University of the South Pacific, Port Vila.

Heine, Bernd & Tania Kuteva. 2002. *World lexicon of grammaticalization*. Cambridge: Cambridge University Press.

Higginbotham, James T. 2000. Accomplishments. *Proceedings of GLOW in Asia II*, 72-82.

Himmelmann, Nikolaus P. 2019. Prosody in language documentation. In Jost Gippert, Nikolaus P. Himmelmann & Ulrike Mosel (eds.), *Essentials in language documentation*, 162-182. Berlin: De Gruyter Mouton.

Hiraiwa, Ken & Adams Bodomo. 2008. Object-sharing as symmetric sharing: Predicate clefting and serial verbs in Dàgáárè. *Natural Language and Linguistic Theory* 26(4): 795-832.

Hirsch, Nils. 2018. *German psych verbs: Insights from a decompositional perspective*. PhD thesis, Humboldt-University of Berlin.

Hoekstra, Teun. 1988. Small clause results *Lingua* 74, 101-139.

Hohaus, Vera. to appear. The syntax and semantics of the Samoan *sili*-construction. In Lauren E. Clemens & Diane Massam (eds.), *Polynesian syntax and its interfaces*. Oxford: Oxford University Press.

Hohaus, Vera. 2018. How do degrees enter the grammar? Language change in Samoan from [-DSP] to [+DSP]. *Proceedings of TripleA 4*, 106-210.

Hohaus, Vera. 2016. The inchoative aspect in Samoan. *Proceedings of the 23rd Meeting of the Austronesian Formal Linguistics Association (AFLA23)*, 96-110.

Hohaus, Vera. 2015. *Context and composition: How presuppositions restrict the interpretation of free variables*. PhD thesis, University of Tübingen.

Hohaus, Vera & Anna Howell. 2015. Alternative semantics for focus and questions: Evidence from Samoan. *Proceedings of the 21st Meeting of the Austronesian Formal Linguistics Association (AFLA21)*, 69-86.

Homer, Vincent. 2009. Backward control in Samoan. *Proceedings of the 16th Meeting of the Austronesian Formal Linguistics Association (AFLA16)*, 45-59.

Hopperdietzel, Jens. to appear. Causative morphology as Voice-driven allomorphy: The case of Samoan *fa'a*-causatives. In Diane Massam & Lauren E. Clemens (eds.), *Polynesian syntax and its interfaces*. Oxford: Oxford University Press.

Hopperdietzel, Jens. 2020a. Hopperdietzel Collection: Elicitation of resultative structures in Daakaka (West-Ambrym, Vanuatu). *Kaipuleohone: Digital Language Archive*. Honolulu, HI: University of Hawai'i at Manoa. https://scholarspace.manoa.hawaii.edu/handle/10125/65832.

Hopperdietzel, Jens. 2020b. Pseudo noun incorporation and differential object marking: Object agreement in Daakaka. *Proceedings of the 26th Meeting of the Austronesian Formal Linguistics Association (AFLA 26)*, 106-123.

Hopperdietzel, Jens. 2018. The morphosyntactic status of the subject (marker) in Daakaka (West-Ambrym). Paper presented at 10th International Austronesian and Papuan Languages and Linguistics Conference (APLL10), University of Surrey, Guildford.

Hopperdietzel, Jens. 2017. Argument markers in West-Ambrym languages: Clitic doubling or agreement. Paper presented at 12th Conference of the Association for Linguistic Typology (ALT12), Australian National Unversity, Canberra.

Hopperdietzel, Jens & Nicola Klingler. 2019. On the prosodic integration of serial verb constructions in Daakaka (Oceanic). Paper presented at Phonologie und Phonetik Tagung 15 (P&P15), Heinrich-Heine-University Düsseldorf.

Hu, Xuhui. 2018. *Encoding events: Functional structure and variation*. Oxford: Oxford University Press.

Huang, C.-T. James. 2006. Resultatives and unaccusatives: A parametric view. *Bulletin of the Chinese Linguistic Society of Japan* 253, 1-43.

Hunkin-Finau, Salusalumālō S. 2006. An indigenous approach to teacher preparation for American Sāmoa. *Educational Perspectives* 39(1), 47-52.

Hunkin, Galumalemana Afeleti. 1992. *Gagana Samoa: A Samoan language coursebook*. Auckland: Polynesian Press.

Husband, E. Matthew. 2018. Speaking of death. *Philosophical Transactions of the Royal Society B: Biological Sciences* 373 (1754). doi: 10.1098/rstb.2018.0172.

Husband, E. Matthew. 2011. Rescuing manner/result complementarity from certain death. *Proceedings of the 47th Annual Meeting of the Chicago Linguistic Society (CLS47/1)*, 111-124.

Hyslop, Catriona. 2001. *The Lolovoli dialect of the North-East Ambae language, Vanuatu*. Canberra: Australian National University.

Inkelas, Sharon & Cheryl Zoll. 2006. *Reduplication: Doubling in morphology*. Cambridge: Cambridge University Press.

Iwata, Seizi. 2020. *English resultatives: A force-recipient account*. Amsterdam: John Benjamins.

Iwata, Seizi. 1995. The distinctive character of psych-verbs as causatives. *Linguistic Analysis* 25, 95-120.

Jackendoff, Ray. 1990. *Semantic structures*. Cambridge, MA: MIT Press.

Jacobs, Peter. 2011. *Control in Skwxwú7mesh*. PhD thesis, University of British Columbia, Vancouver.

Jacobsen, Wesley. 1992. *The transitive structure of events in Japanese* (Studies in Japanese Linguistics 1). Tokyo: Kurosio.

Jäger, Gerhard & Reinhard Blutner. 2000. Against lexical decomposition in syntax. *Proceedings of the 15th Annual Conference of the Israel Association for Theoretical Linguistics (IATL15)*, 113-137.

Jarkey, Nerida. 2015. *Serial verbs in White Hmong*. Leiden: Brill.

Jarkey, Nerida. 1991. *Serial verbs in White Hmong: A functional approach*. PhD thesis, University of Sydney.

Jauncey, Dorothy G. 2011. *Tamambo, the language of West Malo, Vanuatu*. Canberra: Pacific Linguistics.

Johannessen, Janne B. 1998. *Coordination*. Oxford: Oxford University Press.

Johnson, Kyle. 2009. Gapping is not VP-ellipsis. *Linguistic Inquiry* 40*, 289-329.*

Johnston, Raymond. 1978. Serial verbs and the expression of concepts of location and motion in Nakanai. In Stephen A. Wurm & Lois Carrington (eds.), *Proceedings of the 2nd International Conference on Austronesian Linguistics (ICAL2)*, 1043-1065. Canberra: Australian National University.

Julien, Marit. 2002. *Syntactic heads and word formation*. Oxford: Oxford University Press.

Jung, Hyun-Kyoung. 2014. *On applicatives and causatives*. PhD thesis, University of Arizona, Tucson, AZ.

Kalin, Laura. 2018. Licensing and differential object marking: The view from Neo-Aramaic. *Syntax* 21(2), 112-159.

Kalin, Laura. 2014. *Aspect and argument licensing in Neo-Aramaic*. PhD thesis, University of California, Los Angeles, CA.

Kalin, Laura & Edward Keenan. 2011. TP serialization in Malagasy. *Proceedings of the 18th Meeting of the Austronesian Formal Linguistics Association (AFLA18)*, 31-45.

Kallulli, Dalina. 2006. A unified analysis of passives and anticausatives. *Proceedings of Sinn und Bedeutung (10/1)*, 171-182.

Kamp, Hans & Antje Rossdeutscher. 1994. DRS-construction and lexically driven inference. *Theoretical Linguistics* 20(2-3), 166-235.

Kari, Ethelbert. 2004. *A reference grammar for Degema*. Köln: Köppe.

Kari, Ethelbert. 2003. Serial verb constructions in Degema, Nigeria. *African Study Monographs* 244, 271-289.

Karvovskaya, Lena. 2018. The typology and formal semantics of adnominal possession. PhD thesis, Leiden University.

Kastner, Itamar. 2020. *Voice at the interfaces: The syntax, semantics and morphology of the Hebrew verb*. Berlin: Language Science Press.

Kay, Paul. 1989. Contextual operators: Respective, respectively and vice versa. *Proceedings of the 15th Annual Meeting of the Berkeley Linguistics Society (BLS15)*, 181-192.

Kayne, Richard. 2003. Antisymmetry and Japanese. *English Linguistics* 20(1), 1-40.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Kearns, Kate. 2003. Durative achievements and individual-level predicates on events. *Linguistics and Philosophy* 26(5), 595-635.

Keine, Stefan. 2013. Deconstructing switch reference. *Natural Language & Linguistic Theory* 31(3), 767-826.

Kemmer, Suzanne. 1993. *The middle voice*. Amsterdam: John Benjamins.

Kennedy, Chris & Louise McNally. 2005. Scale structure, degree modification and the semantics of gradable predicates. *Language* 81(2), 345-381.

Kim, Kyumin. 2011. High applicatives in Korean causatives and passives. *Lingua* 121(3), 487-510.

Kiparsky, Paul. 1997. Remarks on denominal verbs. In Alex Alsina, Joan Bresnan & Peter Sells (eds.), *Complex predicates*, 473-499. Stanford, CA: CSLI Publications.

Klamer, Marian. 2018. Typology and grammaticalization in Papuan languages of Timor, Alor, and Pantar. In Heiko Narrog & Bernd Heine (eds.), *Grammaticalization from a typological perspective*, 235-262. Oxford: Oxford University Press.

Klein, Wolfgang. 1994. *Time in language*. London: Routledge.

Ko, Heejeong & Daeyoung Sohn. 2015. Decomposing complex serialization: The role of *v*. *Korean Linguistics* 17(1), 78-125.

Koenig, Jean-Pierre & Anthony Davis. 2001. Sublexical modality and the structure of lexical semantic representations. *Linguistics and Philosophy* 24(1), 71-124.

Koev, Todor. 2017. Adverbs of change, aspect and underspecification. *Proceedings of the 27th Semantics and Linguistic Theory Conference (SALT27)*, 22-42.

Koontz-Garboden, Andrew. 2012. The monotonicity hypothesis. In Violeta Demonte & Louise McNally (eds.), *Telicity, change and state: A cross-categorial view of event structure*, 139-161. Oxford: Oxford University Press.

Koontz-Garboden, Andrew. 2009. Anticausativization. *Natural Language & Linguistic Theory* 27(1), 77-138.

Koontz-Garboden, Andrew. 2007a. Aspectual coercion and the typology of change-of-state predicates. *Journal of Linguistics* 43(1), 115-152.

Koontz-Garboden, Andrew. 2007b. Aspectual coercion and the typology of change of state predicates. *Journal of Linguistics* 43(1), 115-152.

Koontz-Garboden, Andrew. 2005. On the typology of state/change of state alternations. *Yearbook of Morphology*, 83-117.

Koontz-Garboden, Andrew, Emily Hanink & Emmanuel-Moselly Makasso. 2019. Property concepts in Basaa and the ontology of gradability across category. *Proceedings of the 29th Semantics and Linguistic Theory Conference (SALT29)*, 201-218.

Koopman, Hilda. 2012. Samoan ergativity as double passivization. In Laura Brugé et al. (eds.), *Functional heads: The cartography of syntactic structures*, vol. 7, 168-180. Oxford: Oxford University Press.

Kozinsky, Isaac & Maria Polinsky. 1993. Causee and patient in the causative of transitive: Coding conflict or doubling of grammatical relations? In Bernard Comrie & Maria Polinsky (eds.), *Causatives and transitivity*, 177-240. Amsterdam: John Benjamins.

Krajinovic, Ana. 2020. *Tense, mood and aspect in Nafsan (South Efate) from a typological perspective: The perfect aspect and the realis/irrealis mood*. PhD thesis, Humboldt-University of Berlin.

Krajinovic, Ana. 2019. The semantics of perfect in Nafsan and implications for typology. In Ryan Bochnak, Miriam Butt, Erlinde Meertens & Mark-Matthias Zymla (eds.), *Proceedings of Triple A5: Fieldwork perspectives on the semantics of African, Asian and Austronesian languages*, 106-121. Tübingen: University Library.

Kramer, Ruth. 2016. The location of gender features in the syntax. *Language and Linguistics Compass* 10(11), 661-677.

Kratzer, Angelika. 2007. On the plurality of verbs. In Johannes Dölling, Tatjana Heyde-Zybatow & Martin Schäfer (eds.), *Event structures in linguistic form and interpretation*, 269–300. Berlin: de Gruyter.

Kratzer, Angelika. 2005. Building resultatives. In Claudia Maienborn & Angelika Wöllstein (eds.), *Event arguments: Foundations and applications*, 177-212. Tübingen: Niemeyer.

Kratzer, Angelika. 2000. Building statives. *Proceedings of the 26th Annual Meeting of the Berkeley Linguistics Society (BLS26)*, 385-399.

Kratzer, Angelika. 1998. More structural analogies between pronouns and tenses. *Proceedings of the 8th on Semantics and Linguistic Theory Conference (SALT8)*, 92-110.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase structure and the lexicon*, 109-137. Dordrecht: Kluwer.

Kraußе, Daniel, Bill Palmer & Catriona Malau. 2019. A non-serializing resultative construction in Vurës (Vanuatu). Paper presented at the 11th Conference on Oceanic Linguistics (COOL11), University of New Caledonia, Nouméa.

Krifka, Manfred. 2017. *Daa ne Daakie kevene: Daakie dictionary*. Seattle, WA: CreateSpace.

Krifka, Manfred. 2013. *Daakie: The Language Archive*. Nijmegen: Max Planck Institute for Psycholinguistics.

Krifka, Manfred. 2011. Notes on Daakie (Ambrym, Vanuatu): Sounds and modality. *Proceedings of the 18th Meeting of the Austronesian Formal Linguistics Association (AFLA18)*, 46-65.

Krifka, Manfred. 1998. The origins of telecity. In Susann Rothstein (ed.), *Events and grammar*, 197-235. Dordrecht: Kluwer.

Krifka, Manfred. 1995. Swahili. In Joachim Jacobs, Armin von Stechow, Wolfgang Sternefeld & Theo Vennemann (eds.), *Syntax: An international handbook of contemporary research*, vol. 2, 1397-1418. Berlin: de Gruyter.

Krifka, Manfred. 1992. Thematic relations as links between nominal reference and temporal constitution. In Ivan A. Sag & Anna Szabolcsi (eds.), *Lexical matters*, 29-53. Stanford, CA: CSLI.

Krifka, Manfred. 1989. Nominal reference, temporal constitution and quantification in event semantics. In Renate Bartsch, Johan van Benthem & Peter von Emde Boas (eds.), *Semantics and contextual expression*, 75-115. Dordrecht: Foris.

Krifka, Manfred & Fereshteh Modarresi. 2016. Number neutrality and anaphoric update of pseudo-incorporated nominals in Persian (and weak definites in English). *Proceedings of the 26th Semantics and Linguistic Theory Conference (SALT 26)*, 874–891.

Kroeger, Paul. 2010. The Grammar of hitting and breaking and cutting in Kimaragang Dusun. *Oceanic Linguistics* 49(1), 1-20.

Krupa, Viktor. 1982. *The Polynesian languages: A guide*. London: Routledge & Kegan Paul.

Kubota, Yusuke & Robert Levine. 2016. The syntax and semantics interface of 'respective' predication: A unified analysis in Hybrid-Type Categorial Grammar. *Natural Language & Linguistic Theory* 34(3), 911-973.

Laca, Brenda. 2006. Indefinites, quantifiers and pluractionals: What scope effects tell us about event pluralities. In Liliane Tasmowski & Svetlana Vogeleer (eds.), *Non-definiteness and plurality*, 191-217. Amsterdam: John Benjamins.

Lakoff, George. 1965. *On the nature of syntactic irregularity*. PhD thesis, Indiana University, Bloomington, IN.

Lambert-Brétière, Renée. 2009. Serializing languages as satellite-framed: The case of Fon. *Annual Review of Cognitive Linguistics* 7(1), 1-29.

Landau, Idan. 2010. *The locative syntax of experiencer*. Cambridge, MA: MIT Press.

Larsen, Darrell. 2014. *Particles and particle-verb constructions in English and other Germanic languages*. PhD thesis, University of Delaware, Newark, DE.

Larson, Richard. 1991. Some issues in verb serialization. In Claire Lefebvre (ed.), *Serial verbs: Grammatical, comparative and cognitive approaches*, 185-211. Amsterdam: John Benjamins.

Lauer, Sven & Prerna Nadathur. 2020. Causal necessity, causal sufficiency and the implications of causative verbs. *Glossa* 5(1), 49, 1-27. doi: 10.5334/gjgl.497.

Lechner, Winfried, Giorgos Spathas, Artemis Alexiadou & Elena Anagnostopoulou. 2015. On deriving the typology of repetition and restitution. Paper presented at the 38th Generative Linguistics in the Old World Conference (GLOW38), Paris 8 & CNRS, Paris.

Lefebvre, Claire. 1991. Take serial verb constructions in Fon. In Claire Lefebvre (ed.), *Serial verbs: Grammatical, comparative and cognitive approaches*, 37-78. Amsterdam: John Benjamins.

Legate, Julie A. 2014. *Voice and v: Lessons from Acehnese*. Cambridge, MA: MIT Press.

Legate, Julie A. 2008. Morphological and abstract case. *Linguistic Inquiry* 39(1), 55-101.

Lesā, Fa‘afetai. 2009. *The impact of Samoan Christian churches on Samoan language competency and cultural identity*. PhD thesis, University of Hawai'i at Manoa, Honolulu, HI.

Levin, Beth. 2020. Resultatives and constraints on concealed causatives. In Elitzur Bar-Asher Siegal & Nora Boneh (eds.), *Perspectives on causation: Selected papers from the Jerusalem 2017 Workshop*. Dordrecht: Springer.

Levin, Beth. 2019. Resultatives and causation. Ms., Stanford University, Stanford, CA.

Levin, Beth. 2017. Resultatives and causation. Paper presented at Linguistic Perspectives on Causation Workshop, The Hebrew University of Jerusalem.

Levin, Beth. 1999. Objecthood: An event structure perspective. *Proceedings of the 35th Annual Meeting of the Chicago Linguistic Society (CLS35/1)*, 223-247.

Levin, Beth. 1993. *English verb classes and alternations: A preliminary investigation*. Chicago, IL: University of Chicago Press.

Levin, Beth & Malka Rappaport Hovav. 2019. Lexicalization patterns. In Robert Truswell (ed.), *Oxford handbook of event structure*, 395-425. Oxford: Oxford University Press.

Levin, Beth & Malka Rappaport Hovav. 2014. Manner and result: A view from *clean*. In Rob Pensalfini, Myfany Turpin & Diana Guillemin (eds.), *Language description informed by theory*, 337-357. Amsterdam: John Benjamins.

Levin, Beth & Malka Rappaport Hovav. 2013. Lexicalized meaning and manner/result complementarity. In Boban Arsenijević, Berit Gehrke & Rafael Marín (eds.), *Studies in the composition and decompostion of event predicates*, 49-70. Dordrecht: Springer.

Levin, Beth & Malka Rappaport Hovav. 2011. Lexical conceptual structure. In Claudia Maienborn, Klaus von Heusinger & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning*, vol. 1, 420-440. Berlin: de Gruyter Mouton.

Levin, Beth & Malka Rappaport Hovav. 2008. Lexicalized manner and result are in complementary distribution. Paper presented at the 24th Meeting of the Israeli Association for Theoretical Linguistics (IATL24), The Hebrew University of Jerusalem.

Levin, Beth & Malka Rappaport Hovav. 2005. *Argument realization*. Cambridge: Cambridge University Press.

Levin, Beth & Malka Rappaport Hovav. 2001. An event structure account of English resultatives. *Language* 77(4), 766-797.

Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the syntax-lexical semantics interface*. Cambridge, MA: MIT Press.

Levin, Beth & Malka Rappaport Hovav. 1991. Wiping the slate clean: A lexical semantic exploration. *Cognition* 41, 123-151.

Levin, Juliette & Diane Massam. 1985. Surface ergativity: Case/theta relations re-examined. *Proceedings of the 15th Annual Meeting of the North-Eastern Linguistic Society (NELS15)*, 286-301.

Levin, Theodore. 2015. *Licensing without case*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Levin, Theodore & Maria Polinsky. 2019. Morphology in Austronesian languages. *Oxford Research Encyclopedia: Linguistics*. doi: 10.1093/acrefore/9780199384655.013.527

Lewis, David. 1973. Causation. *The Journal of Philosophy* 70, 556-567.

Li, Charles N & Sandra A Thompson. 1973. Serial verb constructions in Mandarin Chinese: Subordination or coordination. *You take the high node and I'll take the low node: Papers from the Comparative Syntax Festival*, 96-103.

Lichtenberk, Frantisek. 2006. Serial verb constructions in Toqabaqita. In Alexandra Y. Aikhenvald & Robert M. W. Dixon (eds.), *Serial verb constructions: A cross-linguistic typology*, 254-272. Oxford: Oxford University Press.

Lichtenberk, Frantisek. 1991. Semantic change and heterosemy in grammaticalization. *Language* 67(3), 475-509.

Lichtenberk, Frantisek. 1983. *A grammar of Manam*. Honolulu, HI: University of Hawai'i Press.

Lidz, Jeffrey & Alexander Williams. 2002. Reflexity and resultatives. *Proceedings of the 21th Meeting of the West Coast Conference on Formal Linguistics (WCCFL21)*, 104-114.

Lin, Jimmy. 2004. *Event structure and the encoding of arguments: The syntax of the Mandarin and English verb phrase*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Lincoln, Peter C. 1976. *Describing Banoni: An Austronesian language of Southwest Bougainville*. PhD thesis, University of Hawai'i at Manoa, Honolulu, HI.

Liu, Jianxu. 2019. *The syntax of V-V resultatives in Mandarin Chinese*. PhD thesis, University of Victoria.

Lloret Florenciano, Asunción. 2018. *Syntactic variation in Papiamentu/o: Directional and resultative serial verb constructions*. PhD thesis, University of Hamburg.

Lohndal, Terje. 2014. *Phrase structure and argument structure: A case study of the syntax-semantics interface*. Oxford: Oxford University Press.

Lohndal, Terje. 2012. *Without specifiers: Phrase structure and events*. PhD thesis, University of Maryland, College Park, MD.

Lomashvili, Leila. 2011. *Complex predicates: The syntax-morphology interface*. Amsterdam: John Benjamins.

Longobardi, Giuseppe. 2008. Reference to individuals, person, and the variety of mapping parameters. In Henrik Høeg Müller & Alex Klinge (eds.), *Essays on nominal determination: From morphology to discourse management*, 189-211. Amsterdam: Benjamins.

Lord, Carol. 1993. *Historical change in serial verb constructions*. Amsterdam: John Benjamins.

Lovestrand, Joseph. 2018. *Serial verb constructions in Barayin: Typology, description and Lexical-Functional Grammar*. PhD thesis, University of Oxford.

Lynch, John. 2004. Serial and compound verbs in Anejom̃ (Vanuatu). In Isabelle Bril & Françoise Ozanne-Rivierre (eds.), *Complex predicates in Oceanic languages: Studies in the dynamics of binding and boundness*, 145-166. Berlin: Mouton de Gruyter.

Lynch, John, Malcolm Ross & Terry Crowley. 2002. *The Oceanic languages*. Richmond: Curzon Press.

Lyutikova, Ekaterina & Sergei Tatevosov. 2014. Causativization and event structure. In Bridget Copley & Fabienne Martin (eds.), *Causation in grammatical structures*, 279-327. Oxford: Oxford University Press.

Maʻiaʻi, Papāaliʻi S. 2010. *Tusi ʻupu Sāmoa*. Auckland: Little Island Press.

Mager, John F. 1952. *Gedaged-English dictionary*. Columbus, OH: Board of Foreign Missions of the American Lutheran Church.

Majid, Asifa & Melissa Bowermann (eds.). 2007. Cutting and breaking events: A crosslinguistic perspective. [Special Issue]. *Cognitive Linguistics* 18(2),

Malau, Catriona. 2016. *A grammar of Vurës, Vanuatu*. Berlin: de Gruyter Mouton.

Marantz, Alec. 2013a. Locality domains for contextual allomorphy across the interfaces. In Ora Matushansky & Alec Marantz (eds.), *Distributed Morphology today: Morphemes for Morris Halle*, 95-115. Cambridge, MA: MIT Press.

Marantz, Alec. 2013b. Verbal argument structure: Events and participants. *Lingua* 130, 152-168.

Marantz, Alec. 2009. Resultatives and re-resultatives: Direct objects may construct events by themselves. Paper presented at Penn Linguistics Colloquium, University of Pennsylvania, Philadelphia, PA.

Marantz, Alec. 2001. Words and things. Ms., Massachusetts Institute of Technology, Cambridge, MA.

Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania Working Papers in Linguistics* 4(2), 201-225.

Marantz, Alec. 1991. Case and licensing. *Proceedings of the 8th Eastern States Conference on Linguistics (ESCOL8)*, 234-253.

Marantz, Alec. 1982. Re reduplication. *Linguistic Inquiry* 13(3), 435-482.

Margetts, Anna. 2008. Transitivity discord in some Oceanic languages. *Oceanic Linguistics* 47(1), 30-44.

Margetts, Anna. 2007. Three-participant events in Oceanic languages. *Oceanic Linguistics* 46(1), 71-127.

Margetts, Anna. 2005. Positional slots in Saliba complex verbs. *Oceanic Linguistics* 44(1), 65-89.

Margetts, Anna. 2004. Core-layer junctures in Saliba (Saliba Island, Milne Bay province of Papua New Guinea). In Isabelle Bril & Françoise Ozanne-Rivierre (eds.), *Complex predicates in Oceanic languages: Studies in the dynamics of binding and boundness*, 65-88. Berlin: Mouton de Gruyter.

Margetts, Anna. 1999. *Valence and transitivity in Saliba: An Oceanic language of Papua New Guinea*. PhD thesis, Radboud University Nijmegen.

Margetts, Anna, Andrew Margetts & Carmen Dawuda. 2017. Saliba/Logea. *The Language Archive*. Nijmegen: Max Planck Institute for Psycholinguistics.

Marsack, C. C. 1975. *Samoan*, 4th edn. Norwich: English Universities Press.

Martí, Luisa. 2011. Implicit indefinite objects: Grammar, not pragmatics. Ms., Queen Mary University of London.

Martin, Fabienne. 2020. Aspectual differences between agentive and non-agentive uses of causative predicates. In Elitzur Bar-Asher Siegal & Nora Boneh (eds.), *Perspectives on causation: Selected papers from the Jerusalem 2017 Workshop*. Amsterdam: Springer.

Martin, Fabienne. 2018. Time in probabilistic causation: Direct vs. indirect uses of lexical causative verbs. *Proceedings of Sinn und Bedeutung 22 (SuB22/2)*, 107-124.

Martin, Fabienne & Hamida Demirdache. 2020. Partitive event descriptions across languages. *Linguistics*,

Martin, Fabienne & Florian Schäfer. 2017. Sublexical modality in defeasible causative verbs. In Ana Arregui, Maria L. Rivero & Andrés Salanova (eds.), *Modality across syntactic categories*, 87-108. Oxford: Oxford University Press.

Martin, Fabienne & Florian Schäfer. 2014. Causation at the syntax/semantics interface. In Bridget Copley & Fabienne Martin (eds.), *Causation in grammatical structures*, 209-244. Oxford: Oxford University Press.

Martin, Fabienne, Hongyuan Sun, Hamida Demirdache & Jinhong Liu. 2020. Monomorphemic verbs in Mandarin Chinese: Lexical aspect, event structure and non-culminating uses. Ms., Humboldt-University of Berlin, University of Nantes & Guangzhou College of South China University of Technology.

Marvin, Tatjana. 2002. *Topics in the stress and syntax of words*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Massam, Diane. 2013. Nuclear complex predicates in Niuean. *Lingua* 135, 56-80.

Massam, Diane. 2009a. Noun incorporation: Essentials and extensions. *Language and Linguistics Compass* 3(4), 1076-1096.

Massam, Diane. 2009b. The structure of (un)ergatives. *Proceedings of the 16th Meeting of the Austronesian Formal Linguistics Association (AFLA16)*, 125-135.

Massam, Diane. 2005. Lexical categories, lack of inflection, and predicate-fronting in Niuean. In Andrew Carnie, Heidi Harley & Sheila A. Dooley (eds.), *Verb first: On the syntax of verb-initial languages*, 227-242. Amsterdam: John Benjamins.

Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language & Linguistic Theory* 19(1), 153-197.

Massam, Diane, Victoria Peter & Lianna Wang. 2012. Radical pro-drop in Niuean. *Proceedings of the 2012 Annual Conference of the Canadian Linguistic Association (CLA)*, 1-10.

Massam, Diane, Daniel Bild-Enkin, Alex Rozin & Filip Tisma. 2016. Complex predicates in Niuean. *Toronto Working Papers in Linguistics* 35, 1-18.

Mateu, Jaume. 2012a. Conflation and incorporation processes in resultative constructions. In Violeta Demonte & Louise McNally (eds.), *Telicity, change and state*, 252-278. Oxford: Oxford University Press.

Mateu, Jaume. 2012b. Structure of the verb phrase. In José H. Hualde, Antxon Olarrea & Erin O'Rourke (eds.), *The handbook of Hispanic linguistics*, 333-353. Hoboken, NJ: Wiley.

Mateu, Jaume. 2005. Arguing our way to the Direct Object Restriction on English resultatives. *Journal of Comparative Germanic Linguistics* 8(1-2), 55-82.

Mateu, Jaume. 2002. *Argument structure: Relational construal at the syntax-semantics interface*. PhD thesis, Autonomous University of Barcelona.

Mateu, Jaume & Víctor Acedo-Matellan. 2015. Parameters and argument structure I: Motion predicates and resultatives. In Antonio Fábregas, Jaume Mateu & Michael Putnam (eds.), *Contemporary linguistic parameters*, 99-122. London: Bloomsbury.

Mateu, Jaume & Víctor Acedo-Matellan. 2012. The manner/result complementarity revisited: A syntactic approach. In María C. Cuervo & Yves Roberge (eds.), *The end of argument structure*, 209–228. Leiden: Brill.

Mathieu, Eric, Brandon J. Fry & Michael Barrie. 2017. Adjunction of complex heads inside words: A reply to Piggott and Travis (2013). In Heather Newell, Máire Noonan, Glynne Piggott & Lisa D. Travis (eds.), *The structure of words at the interfaces*, 240-260. Oxford: Oxford University Press.

Matthewson, Lisa. 2004. On the methodology of semantic fieldwork. *International Journal of American Linguistics* 70(4), 369-415.

Matthewson, Lisa, Heidi Quinn & Lynsey Talagi. 2015. Inchoativity meets the perfect time span: The Niuean perfect. *Lingua* 168, 1-36.

Matushansky, Ora. 2006. Head movement in linguistic theory. *Linguistic Inquiry* 37(1), 69-109.

Mayer, John. 2001. *Code-switching in Samoan: t-style and k-style*. PhD thesis, University of Hawai'i at Manoa, Honolulu, HI.

Mayron, Sapeer. 2019. Year of indigenous languages recognised. *SamoaObserver*, 26.01.2019.

McCawley, James D. 1998. *The syntactic phenomena of English*, 2nd edn. Chicago, IL: University of Chicago Press.

McFadden, Thomas. 2004. *The position of morphological case in the derivation: A study on the syntax-morphology interface*. PhD thesis, University of Pennsylvania, Philadelphia, PA.

McIntyre, Andrew. 2012. The BECOME=CAUSE hypothesis and the polysemy of *get*. *Linguistics* 50(6), 1251-1287.

McIntyre, Andrew. 2005. The semantic and syntactic decomposition of *get*: An interaction between verb meaning and particle placement. *Journal of Semantics* 22(4), 401-438.

McIntyre, Andrew. 2004. Event paths, conflation, argument structure and VP shells. *Linguistics* 42(3), 523-571.

Means, Nathalie, Gordon P. Means & Paul B. Means. 1986. *Sengoi-English, English Sengoi dictionary*. Toronto: Joint Centre on Modern East Asia, University of Toronto/York University.

Medeiros, David. 2020. Hawaiian nominalization. Paper presented at the 43rd Generative Linguistics in the Old World Conference (GLOW43), Humboldt-University of Berlin.

Medeiros, David. 2013. Hawai'ian VP-remnant movement: A cyclic linearization approach. *Lingua* 127, 72-97.

Menon, Mythili & Roumyana Pancheva. 2014. The grammatical life of property concept roots in Malayalam. *Proceedings of Sinn und Bedeutung* 18, 289-302.

Merchant, Jason. 2015. How much context is enough? Two cases of span-conditioned stem allomorphy. *Linguistic Inquiry* 46(2), 273-303.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands and the theory of ellipsis.* Oxford: Oxford University Press.

Meyerhoff, Miriam. 2001. Another look at the typology of serial verb constructions: The grammaticalization of temporal relations in Bislama (Vanuatu). *Oceanic Linguistics* 40(2), 247-268.

Milner, George B. 1972. *Fijian grammar*. Suva: Government Press.

Milner, George B. 1966. *Samoan dictionary*. London: Oxford University Press.

Mithun, Marianne. 2001. Who shapes the record: The speaker and the linguist. In Paul Newman & Martha Ratliff (eds.), *Linguistic fieldwork*, 34-54. Cambridge: Cambridge University Press.

Mittwoch, Anita. 2005. Unspecified arguments in episodic and habitual sentences. In Nomi Erteschik-Shir & Tova Rapoport (eds.), *The syntax of aspect: Deriving thematic and aspectual interpretation*, 237-254. Oxford: Oxford University Press.

Miyagawa, Shigeru. 2017. *Agreement beyond phi*. Cambridge, MA: MIT Press.

Miyagawa, Shigeru. 2012. Blocking and causatives revisited: Unexpected competition across derivations. In Shigeru Miyagawa (ed.), *Case, argument structure, and word order*, 195-216. Oxford: Routledge.

Mosel, Ulrike. 2004. Complex predicates and juxtapositional constructions in Samoan. In Isabelle Bril & Françoise Ozanne-Rivierre (eds.), *Complex predicates in Oceanic languages: Studies in the dynamics of binding and boundness*, 263-296. Berlin: Mouton de Gruyter.

Mosel, Ulrike. 2000. Aspect in Samoan. In Walter Breu (ed.), *Probleme der Interaktion von Lexik und Aspekt*, 179-192. Tübingen: Niemeyer.

Mosel, Ulrike. 1985. *Ergativity in Samoan* (Arbeiten des Kölner Universalien Projects (AKUP 61)). Cologne: Department of Linguistics.

Mosel, Ulrike & Yvonne Thiesen. 2007. The Teop sketch grammar. Ms., Christian-Albrecht-University of Kiel.

Mosel, Ulrike & Ainslie So'o. 2000. *Utugagana*. Apia: Department of Education.

Mosel, Ulrike & Even Hovdhaugen. 1992. *Samoan reference grammar*. Oslo: Scandinavian University Press.

Moseley, Christopher (ed.) 2010. *Atlas of the world's languages in danger*, 3rd edn. Paris: UNESCO Publishing.

Moskal, Beata. 2015. *Domains on the border: Between morphology and phonology*. PhD thesis, University of Connecticut, Storrs, CT.

Moyse-Faurie, Claire. 2018. Grammaticalization in Oceanic languages. In Bernd Heine & Heiko Narrog (eds.), *Grammaticalization from a typological perspective*, 282-308. Oxford: Oxford University Press.

Moyse-Faurie, Claire. 2015. Valency classes in Xârâcùù (New Caledonia). In Andrej Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages*, vol. 2, 1015-1068. Berlin: de Gruyter Mouton.

Moyse-Faurie, Claire. 2012. The concept 'return' as a source of different developments in Oceanic languages. *Oceanic Linguistics* 51(1), 234-260.

Muāgututi'a, Grant. 2018. *Recovering ergativity in heritage Samoan*. PhD thesis, University of Hawai'i at Manoa, Honolulu, HI.

Muāgututi'a, Grant. 2017. The acquisition of ergativity in Samoan. *University of Hawai'i at Manoa: Working Papers in Linguistics* 48(5), 1-14.

Müller, Stefan. 2002. *Complex predicates: Verbal complexes, resultative constructions and particle verbs in German*. Stanford: CSLI Publications.

Munn, Alan. 1993. *Topics in the syntax and semantics of coordinate structures*. PhD thesis, Massachusettes Insitute of Technology, Cambridge, MA.

Myler, Neil. 2016. *Building and interpreting possession sentences* Cambridge, MA: MIT Press.

Næss, Åshild. 2013. From Austronesian voice to Oceanic transitivity: Äiwoo as the "missing link". *Oceanic Linguistics* 52(1), 106-124.

Næss, Åshild. 2012. Cutting and breaking in Äiwoo: Event integration and the complexity of lexical expressions. *Cognitive Linguistics* 23(2), 395-420.

Næss, Åshild & Brenda H. Boerger. 2008. Reefs-Santa Cruz as Oceanic: Evidence from the verb complex. *Oceanic Linguistics* 47(1), 185-212.

Neeleman, Ad & Hans van de Koot. 2012. The linguistic expression of causation. In Martin Everaert, Marijana Marelj & Tal Siloni (eds.), *The theta system: Argument structure at the interface*, 20-52. Oxford: Oxford University Press.

Newell, Heather. 2008. *Aspects of the morphology and phonology of phases*. PhD thesis, McGill University, Montreal.

Nie, Yining. 2020. *Licensing arguments*. PhD thesis, New York University.

Nie, Yining. 2017. Voice morphology and the features of transitivity. Ms., New York University.

Nordlinger, Rachel. 2014. Serial verbs in Wambaya. In Rob Pensalfini, Myfany Turpin & Diana Guillemin (eds.), *Language description informed by theory*, 263-282. Amsterdam: John Benjamins.

Norris, Mark. 2014. *A theory of nominal concord*. PhD thesis, University of California, Santa Cruz, CA.

Nuger, Justin. 2016. *Building predicates: The view from Palauan*. Dordrecht: Springer.

Nuñes, Jairo. 1995. *The copy theory of movement and linearization of chains in the Minimalist Programm*. PhD thesis, University of Maryland, College Park, MD.

Oehrle, Richard. 1976. *The grammatical status of the English dative alternation*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Oseki, Yohei. 2017. Voice morphology in Japanese argument structure. Ms., New York University.

Ostrove, Jason. 2016. A case of non-linearly conditioned contextual allomorphy in Scottish Gaelic. Ms., Santa Cruz University of California, CA.

Osumi, Midori. 1990. *A grammar of Tinrin (New Caledonia)*. PhD thesis, Australian National University, Canberra.

Ota, Katsuhiro. 1999. *Aspects of case-marking and transitivity in Polynesian*. PhD thesis, University of Hawai'i at Mano'a, Honolulu, HI.

Othaka, Akane. 2013. On phi-feature "copying". *JELS* 30, 166-172.

Otsuka, Yuko. 2012. Verb serialization in Tongan and why it is not raising or control. Paper presented at the 19th Meeting of the Austronesian Formal Linguistics Association (AFLA19), Academia Sinica, Tawain.

Otsuka, Yuko. 2005. Two derivations of VSO: A comparative study of Niuean and Tongan. In Andrew Carnie, Heidi Harley & Sheila Ann Dooley (eds.), *Verb first: On the syntax of verb-initial languages*, 65-90. Amsterdam: John Benjamins.

Otsuka, Yuko. 2000. *Ergativity in Tongan*. PhD thesis, University of Oxford.

Owens, Melanie. 2011. *Serial verb constructions: Argument structural uniformity and event structural diversity*. PhD thesis, Stanford University, Stanford, CA.

Ozanne-Rivierre, Françoise & Jean-Claude Revierre. 2004. Verbal compounds and lexical prefixes in the languages of New Caledonia. In Isabelle Bril & Françoise Ozanne-Rivierre (eds.), *Complex predicates in Oceanic languages: Studies in the dynamics of binding and boundness*, 347-372. Berlin: Mouton de Gruyter.

Palmer, Bill. 2009. *Kokota grammar*. Honolulu, HI: University of Hawai'i Press.

Parsons, Terence. 1990. *Events in the semantics of English: A study in subatomic semantics*. Cambridge, MA: MIT Press.

Paschen, Ludger. 2018. *The interaction of reduplication and segmental mutation: A phonological account*. PhD Thesis, Leipzig University.

Paton, William F. 1973. *Ambrym (Lonwolwol) dictionary*. Canberra: Pacific Linguistics.

Paton, William F. 1971. *Ambrym (Lonwolwol) grammar*. Canberra: Pacific Linguistics.

Paul, Ileana, Baholisoa S. Ralalaoherivony & Henriëtte de Swart. 2016. Malagasy *maha* at the crossroads of voice, causation and modality. *Proceedings of the 42nd Meeting of the Berkeley Linguistics Society (BLS42)*, 353-368.

Pawley, Andrew. 1987. Encoding events in Kalam and English: Different logics for reporting experience. In Russell S. Tomlin (ed.), *Coherence and grounding in discourse*, 329-360. Amsterdam: John Benjamins.

Pawley, Andrew. 1973. Some problems in Proto-Oceanic grammar. *Oceanic Linguistics* 12(1/2), 103-188.

Pawley, Andrew. 1972. On the internal relationships of Eastern Oceanic languages. In Roger Green & Marion Kelly (eds.), *Studies in Oceanic culture history*, vol. 3, 1-142. Honolulu, HI: Bernice P. Bishop Museum.

Pawley, Andrew. 1966. Samoan phrase structure: The morphology-syntax of a Western Polynesian language. *Anthropological Linguistics* 8(5), 1-63.

Pearce, Elizabeth. 2017. Functional predicates in Unua. *Australian Journal of Linguistics* 37(1), 19-36.

Pearce, Elizabeth. 2015. Completing and terminating: On aspect marking in Unua. In Alexandre François, Sébastien Lacrampe, Stefan Schnell & Michael J. Franjieh (eds.), *The languages of Vanuatu: Unity and diversity*, 23-52. Canberra: Asia-Pacific Linguistcs.

Pearce, Elizabeth. 2002. VP versus V raising in Māori. *Proceedings of the 8th Meeting of the Austronesian Formal Linguistics Association (AFLA8)*, 225-240.

Pedersen, Walter A. 2015. A scalar analysis of *again*-ambiguities. *Journal of Semantics* 32(3), 373-424.

Pesetsky, David. 2014. *Russian case morphology and syntactic categories*. Cambridge, MA: MIT Press.

Pietroski, Paul M. 2000. *Causing actions*. Oxford: Oxford University Press.

Piggott, Glyne & Lisa D. Travis. 2013. Adjuncts within words and complex heads. In Raffaella Folli, Christina Sevdali & Robert Truswell (eds.), *Syntax and its limits*, 157-174. Oxford: Oxford University Press.

Pitteroff, Marcel. 2014. *Non-canonical lassen-middles*. PhD thesis, University of Stuttgart.

Polinsky, Maria. 2016. *Deconstructing ergativity: Two types of ergative languages and their features*. Oxford: Oxford University Press.

Potsdam, Eric & Maria Polinsky. to appear. Austronesian syntax. In Bill Palmer (ed.), *Oceania*. Berlin: Mouton de Gruyter.

Pratt, George. 1878. *A grammar and dictionary of the Samoan language*. London: Trübner.

Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, MA: MIT Press.

Pustejovsky, James. 1991. The syntax of event structure. *Cognition* 41, 47-81.

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.

Rackowski, Andrea & Lisa D. Travis. 2000. V-initial languages: X or XP movement and adverbial placement. In Andrew Carnie & Eithne Guilfoyle (eds.), *The syntax of verb-initial languages*, 117-142. Oxford: Oxford University Press.

Raimy, Eric. 2000. *The phonology and morphology of reduplication*. Berlin: de Gruyter.

Ramchand, Gilian. 2008. *Verb meaning and the lexicon: A first-phase syntax*. Cambridge: Cambridge University Press.

Rapp, Irene & Armin von Stechow. 1999. *Fast* 'almost' and the visibility parameter for functional adverbs. *Journal of Semantics* 16(2), 149-204.

Rappaport Hovav, Malka. 2008. Lexicalized meaning and the internal temporal structure of events. In Susan Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*, 13-42. Amsterdam: John Benjamins.

Rappaport Hovav, Malka & Beth Levin. 2012. Lexicon uniformity and the causative alternation. In Martin Everaert, Marijana Marelj & Tal Siloni (eds.), *The theta system: Argument structure at the interface*, 150-176. Oxford: Oxford University Press.

Rappaport Hovav, Malka & Beth Levin. 2010. Reflections on manner/result complementarity. In Malka Rappaport Hovav, Edit Doron & Ivy Sichel (eds.), *Lexical semantics, syntax and event structure*, 21-38. Oxford: Oxford University Press.

Rappaport Hovav, Malka & Beth Levin. 1998. Building verb meanings. In Miriam Butt & Wilhelm Geuder (eds.), *The projection of arguments: Lexical and compositional factors*, 97-134. Stanford, CA: CSLI Publications.

Rawlins, Kyle. 2013. On adverbs of space and time. In Boban Arsenijević, Berit Gehrke & Rafael Marín (eds.), *Studies in the composition and decomposition of event predicates*, 153-193. Dordrecht: Springer.

Ray, Sidney H. 1926. *A comparative study of the Melanesian island languages*. Cambridge: Cambridge University Press.

Read, Bridget. 2010. *An examination of the causative fa'a- in Samoan*. Master thesis, University of Canterbury, Christchurch.

Reinhart, Tanya. 2002. The theta system - An overview. *Theoretical Linguistics* 28(3), 229-290.

Rezac, Milan. 2011. *Phi-features and the modular architecture of language*. Dordrecht: Springer.

Riaubienė, Benita. 2015. *Resultative secondary predication in European languages*. PhD thesis, Vilnius University.

Richards, Norvin. 2017. Multiple case assignment and the English pseudo-passive. In Nicholas LaCara, Keir Moulton & Anne-Michelle Tessier (eds.), *A Schrift to Fest Kyle Johnson*, 313-320. Amherst, MA: Linguistics Open Access Publications.

Ridge, Eleanor C. 2019. *Variation in Vatlongos verbal morphosyntax*. PhD thesis, School of Oriental and African Studies (SOAS), University of London.

Rissman, Lilia. 2015. Cinderella broke and broke: Object deletion and manner/result complementarity. *Proceedings of the 51st Annual Meeting of the Chicago Linguistic Society (CLS51)*, 425-439.

Rissman, Lilia, Kyle Rawlins & Barbara Landau. 2015. Using instruments to understand argument structure: Evidence for gradient representation. *Cognition* 142, 266-290.

Ritter, Elizabeth. 1991. Two functional categories in noun phrases: Evidence from Modern Hebrew. *Syntax and Semantics* 25, 37-62.

Rivero, Maria L. 1992. Adverb incorporation and the syntax of adverbs in Modern Greek. *Linguistics and Philosophy* 15(3), 289-331.

Roberts, Ian. 1987. *The representation of implicit and dethematized subjects*. Dordrecht: Foris.

Rolle, Nicholas. 2020. In support of an OT-DM model: Evidence from clitic distribution in Degema serial verb constructions. *Natural Language & Linguistic Theory* 38(1), 201-259.

Rolle, Nicholas & Ethelbert Kari. 2016. Degema clitics and serial verb constructions at the syntax/phonology interface. In Doris L. Payne, Sara Pacchiarotti & Mokaya Bosire (eds.), *Diversity in African languages*, 141-163. Berlin: Language Science Press.

Ross, Daniel & Joseph Lovestrand. 2018. What do serial verbs mean? A worldwide survey. Paper presented at Syntax of the World's Languages VIII (SWL8), INALCO, Paris.

Ross, John R. 1967. *Constraints on variables in syntax*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Ross, Malcolm. 2004. The morphosyntactic typology of Oceanic languages. *Language and Linguistics* 5(2), 491-541.

Ross, Malcolm. 2002. Kaulong. In John Lynch, Malcolm Ross & Terry Crowley (eds.), *The Oceanic languages*, 387-409. Richmond: Curzon Press.

Ross, Malcolm. 1998. Proto-Oceanic adjectival categories and their morphosyntax. *Oceanic Linguistics* 37(1), 85-119.

Ross, Malcolm. 1988. *Proto Oceanic and the Austronesian languages of Western Melanesia*. Canberra: Pacific Linguistics.

Ross, Malcolm, Andrew Pawley & Meredith Osmond. 2016. Introduction. In Malcolm Ross, Andrew Pawley & Meredith Osmond (eds.), *The lexicon of Proto-Oceanic: The culture and environment of ancestral Oceanic society*, vol. 5: People: Body and mind, 1-36. Canberra: Asia-Pacific Linguistics.

Rothstein, Susan. 2004. *Structuring events: A study in the semantics of lexical aspect*. Malden, MA: Blackwell.

Roversi, Giovanni. 2019. *The morphosyntactic structure of Äiwoo verb*. Master thesis, University of Oslo.

Rowe, Karen. 2005. *Siar-Lak grammar essentials*. Ukarumpa: Summer Institute of Linguistics.

Sæbø, Kjell J. 2018. "By": A vindication of the Anscombe thesis. Paper presented at Cognitive Structures 2018, Heinrich-Heine-University Düsseldorf.

Sæbø, Kjell J. 2016. "How" questions and the manner-method distinction. *Synthese* 193, 3169-3194.

Sæbø, Kjell J. 2008. The structure of criterion predicates. In Johannes Dölling, Tatjana Heyde-Zybatow & Martin Schäfer (eds.), *Event structures in linguistic form and interpretation*, 127-147. Berlin: Mouton de Gruyter.

Sato, Yosuke. 2019. How can one kill someone twice in Indonesian? Causal pluralism and the tripartite VP structure. Paper presented at the Workshop on Recent Approaches to (Non-)Agentivity in Natural Language, National University of Singapore.

Schäfer, Florian. 2012. Two types of external argument licensing–the case of causers. *Studia Linguistica* 66(2), 128-180.

Schäfer, Florian. 2009. The causative alternation. *Language and Linguistics Compass* 3(2), 641-681.

Schäfer, Florian. 2008. *The syntax of (anti-)causatives: External arguments in change-of-state contexts*. Amsterdam: John Benjamins.

Schäfer, Florian. 2007. *On the nature of anticausative morphology: External arguments in change-of-state contexts*. PhD thesis, University of Stuttgart.

Schmitt, Viola. 2013. *More pluralities*. PhD thesis, University of Vienna.

Schneider, Cindy. 2007. Verb serialization and incipient grammaticalisation in Abma. In Jeff Siegel, John Lynch & Diana Eades (eds.), *Language description, history and development: Linguistic indulgence in memory of Terry Crowley*, 221-235. Amsterdam: John Benjamins.

Schnieder, Benjamin. 2008. 'By': A refutation of the Anscombe thesis. *Linguistics and Philosophy* 31(8), 649-669.

Schultze-Bernd, Eva. 2007. Making sense of complex verbs: On the semantics and argument structure of closed-class verbs and coverbs in Jaminjung. In Melissa Bowerman & Penelope Brown (eds.), *Cross-linguistic perspectives on argument structure: Implications for learnability*, 69-88. Hillsdale, NJ: Erlbaum.

Schütze, Carson T. 1996. *The empirical base of linguistics: Grammaticality judgements and linguistic methodology*. Chicago, IL: Chicago University Press.

Sebba, Mark. 1987. *The syntax of serial verbs: An investigation into serialisation in Sranan and other languages*. Amsterdam: John Benjamins.

Seiter, William. 1978. On the syntactic character of middle objects in Polynesian. In Stephen A. Wurm & Lois Carrington (eds.), *Proceedings of the 2nd International Conference on Austronesian Linguistics (ICAL2)*, 1289-1306. Canberra: Australian National University.

Senft, Gunter (ed.) 2008. *Serial verb constructions in Austronesian and Papuan languages*. Canberra: Pacific Linguistics.

Serratos, Angelina E. 2008. *Topics in Chemehuevi morphosyntax: Lexical categories, predication and causation.* PhD thesis, University of Arizona, Tucson, AZ.

Sheehan, Michelle & Jenneke van der Wal. 2018. Nominal licensing in caseless languages. *Journal of Linguistics* 54(3), 527-589.

Shibatani, Masayoshi. 1976. The grammar of causative constructions: A conspectus. In Masayoshi Shibatani (ed.), *The grammar of causative constructions*, 1-40. New York, NY: Academic Press.

Siegel, Dorothy. 1978. The adjacency constraint and the theory of morphology. *Proceedings of the 8th Annual Meeting of the North East Linguistic Society (NELS8)*, 189-197.

Sigurðsson, Halldór Á. 2012. Minimalist C/case. *Linguistic Inquiry* 43(2), 191-227.

Sillitoe, Catherine. 2016. *A new model for Romance verbal clitics*. PhD thesis, University of Birmingham.

Silverstein, Michael. 1976. Hierarchy of features and ergativity. In Robert M.W. Dixon (ed.), *Grammatical categories in Australian languages*, 112-171. Canberra: Australian National University.

Simpson, Jane. 1983. Resultatives. In Lori Levin, Malka Rappaport Hovav & Annie E. Zaenen (eds.), *Papers in lexical-functional grammar*, 143-157. Bloomington, IN: Indiana University Linguistics Club.

Slobin, Dan. 2006. What makes manner of motion salient? Explorations in linguistic typology, discourse and cognition. In Maya Hickmann & Stéphane Robert (eds.), *Space in languages: Linguistic systems and cognitive categories*, 5-81. Amsterdam: John Benjamins.

Slobin, Dan. 2004. The many ways to search for a frog: Linguistic typology and the expression of motion events. In Sven Strömquist & Ludo Verhoeven (eds.), *Relating events in narrative, vol. 2: Typological and contextual perspectives*, 219-257. Mahwah, NJ: Erlbaum.

Slobin, Dan. 2003. Language and thought online: Cognitive consequences of linguistic relativity. In Dedre Gentner & Susan Goldin-Meadow (eds.), *Language in mind: Advances in the study of language and thought*, 157-192. Cambridge, MA: MIT Press.

Snyder, William. 2001. On the nature of syntactic variation: Evidence from complex predicates and complex word-formation. *Language* 77(2), 324-342.

Solstad, Torgrim. 2009. On the implicitness of arguments in event passives. *Proceedings of the 38th Annual Meeting of the North East Linguistic Society (NELS38/2)*, 365-375.

Solstad, Torgrim. 2006. *Mehrdeutigkeit und Kontexteinfluss: Die Spezifikation kausaler Relationen am Beispiel von durch [Polysemy and the influence of context: The specification of causal relations]*. PhD thesis, University of Oslo.

Son, Minjeong & Peter Svenonius. 2008. Microparameters of cross-linguistic variation: Directed motion and resultatives. *Proceedings of the 27th West Coast Conference on Formal Linguistics (WCCFL27)*, 388-396.

Song, Julio. 2017. There is no root-root merger: Revisiting Chinese non-endocentric compounds. Ms., University of Cambridge.

Spathas, Giorgos & Dimitris Michelioudakis. 2020. States in the decomposition of verbal predicates: Evidence from additive operators. Ms., Leibniz-Centre of General Linguistics Berlin & Aristotle University Thessaloniki.

Spencer, Andrew. 1995. Incorporation in Chuckchi. *Language* 71(3), 439-489.

Sperlich, Wolfgang B. 1993. Serial verb constructions in Namakir of Central Vanuatu. *Oceanic Linguistics* 32(1), 95-110.

Stassen, Leon. 1997. *Intransitive predication*. Oxford: Clarendon Press.

Statistics, New Zealand. 2014. 2013 Census QuickStats about culture and identity. http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-culture-identity/pacific-peoples.aspx <Accessed 04.12.2019>.

Stewart, Osamuyimen T. 2001. *The serial verb construction parameter*. New York, NY: Garland.

Sudharshana, N. P. 2011. Early language-specific encoding of motion events in first and second languages. *The ELF Journal* 2(2), 53-67.

Sugar, Alexander D. 2019. *Verb-linking and events in syntax: The case of Uyghur -(i)p constructions*. PhD thesis, University of Washington, Seattle, WA.

Sugita, Hiroshi. 1973. Semitransitive verbs and object incorporation in Micronesian languages. *Oceanic Linguistics* 12, 393-406.

Svenonius, Peter. 2016. Complex predicates as complementation structures. In Léa Nash & Pollet Samvelian (eds.), *Approaches to complex predicates*, 212-247. Leiden: Brill.

Svenonius, Peter. 2012. Spanning. Ms., CASTL, University of Tromsø.

Svenonius, Peter. 2008. Projections of P. In Anna Asbury, Jakub Dotlacil, Berit Gehrke & Rick Nouwen (eds.), *Syntax and semantics of spatial P*, 63-84. Amsterdam: John Benjamins.

Svenonius, Peter. 2003. Limits of P: Filling in holes vs. falling holes. *Nordlyd. Proceedings of the 19th Scandinavian Conference of Linguistics (SCL19)* 31(2), 431-445.

Swenson, Amanda. 2019. *Malayalam verbs*. Berlin: de Gruyter Mouton.

Szabolcsi, Anna. 1987. Functional categories in the noun phrase. In István Kenesei (ed.), *Approaches to Hungarian*, vol. 2, 167-189. Szeged: JATE.

Talmy, Leonard. 2016. Properties of main verbs. *Cognitive Semantics* 2(2), 133–163.

Talmy, Leonard. 2000. *Toward a cognitive semantics, vol. 2: Typology and process in concept structuring*. Cambridge, MA: MIT Press.

Talmy, Leonard. 1991. Path to realization: A typology of event conflation. *Proceedings of the 17th Annual Meeting of the Berkeley Linguistics Society (BLS17)*, 480-519.

Talmy, Leonard. 1975. Semantics and syntax of motion. In John P. Kimball (ed.), *Syntax and semantics*, vol. 4, 181-238. New York, NY: Academic Press.

Tenny, Carol L. 2000. Core events and adverbial modification. In Carol L. Tenny & James Pustejovsky (eds.), *Events as grammatical objects*, 285-334. Stanford, CA: CSLI Publications.

Tenny, Carol L. 1994. *Aspectual roles and the syntax-semantics interface*. Dordrecht: Kluwer.

Thieberger, Nicholas. 2007. The demise of serial verbs in South Efate. In Jeff Siegel, John Lynch & Diana Eades (eds.), *Language description, history and development: Linguistic indulgence in memory of Terry Crowley*, 237-251. Amsterdam: John Benjamins.

Thieberger, Nicholas. 2006. *A grammar of South Efate: An Oceanic language of Vanuatu*. Honolulu, HI: University of Hawai'i Press.

Thomas, Guillaume. 2019. Mbyá resultatives and the structure of causation. *Glossa* 4(1), 136, 1-38. doi: 10.5334/gjgl.688

Thomson, Judith J. 1977. *Acts and other events*. Ithaca, NY: Cornell University Press.

Thornton, Abigail. 2019. Agreeing in number: Verbal plural suppletion and reduplication. *The Linguistic Review* 36(3), 531-552.

Tollan, Rebecca. 2018. Unergatives are different: Two types of transitivity in Samoan. *Glossa* 3(1), 35, 1-41. doi: 10.5334/gjgl.223

Tollan, Rebecca & Will Oxford. 2018. Voice-less unergatives: Evidence from Algonquian. *Proceedings of the 35th West Coast Conference on Formal Linguistics (WCCFL35)*, 399-408.

Tomioka, Naoko. 2006. *Resultative constructions: Cross-linguistic variation and the syntax-semantics interface*. PhD thesis, McGill University, Montreal.

Tomioka, Satoshi & Chang-Yong Sim. 2007. The event semantic root of inalienable possession. Ms., University of Delaware, Newark, DE.

Toosarvandani, Maziar. 2016. Vocabulary insertion and locality: Verbal suppletion in Northern Paiute. *Proceedings of the 46th Annual Meeting of North East Linguistic Society (NELS46/3)*, 247-257.

Tortora, Christina M. 1998. Verbs of inherently directed motion are compatible with resultative phrases. *Linguistic Inquiry* 29(2), 338-345.

Travis, Lisa D. 2005. Agents and causes in Malagasy and Tagalog. In Nomi Erteschik-Shir & Tova Rapoport (eds.), *The syntax of aspect: Deriving thematic and aspectual interpretation*, 174-189. Oxford: Oxford University Press.

Travis, Lisa D. 2001. The syntax of reduplication. *Proceedings of the 31st Annual Meeting of the North-East Linguistic Society (NELS31)*, 455-469.

Travis, Lisa D. 1988. The syntax of adverbs. *McGill Working Papers in Linguistics: Special Issue on Comparative Germanic Syntax*, 280-310. Montreal: McGill University.

Travis, Lisa D. 1984. *Parameters and effects of word order variation*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Truswell, Robert. 2007a. Extraction from adjuncts and the structure of events. *Lingua* 117(8), 1355-1377.

Truswell, Robert. 2007b. *Locality of wh-movement and the individuation of events*. PhD thesis, University College London.

Tubino Blanco, Mercedes. 2011. *Causatives in minimalism*. Amsterdam: John Benjamins.

Tucker, Matthew A. 2015. Your roots are showing: Two cases of exceptional root-sensitive allomorphy in Arabic. Paper presented at the Roots IV Workshop, University of New York.

Tusun, Alimujiang & Henriëtte Hendriks. 2019. Voluntary motion events in Uyghur: A typological perspective. *Lingua* 226, 69-88.

Tyler, Matthew & Itamar Kastner. 2019. Serial verb construtions and the syntax-prosody interface. Ms., Yale University & Humboldt-University Berlin.

Tyron, Darrel T. 1976. *New Hebrides languages: An internal classification*. Canberra: Pacific Linguistics.

Unterladstetter, Volker. 2020. *Multi-verb constructions in Eastern Indonesia*. Berlin: Language Science Press.

UTexas, University of Texas Libraries. 2002. Samoa Islands. https://legacy.lib.utexas.edu/maps/australia/samoa_islands_2002.gif <Accessed 04.12.2019>.

van Lier, Eva. 2017. The typology of property words in Oceanic languages. *Linguistics* 55(6), 1237-1280.

van Lier, Eva. 2016. Lexical flexibility in Oceanic languages. *Linguistic Typology* 20(2), 197-232.

van Urk, Coppe. 2019a. Constraining predicate fronting. Paper presented at the 42th Generative Linguistics of the Old World conference (GLOW42), University of Oslo.

van Urk, Coppe. 2019b. Object licensing in Fijian and the role of adjacency. *Natural Language & Linguistic Theory* online, 1-52.

van Valin, Robert D., Jr. & David P. Wilkins. 1996. The case for "effector": Case roles, agents and agency revisited. In Masayoshi Shibatani & Sandra A. Thompson (eds.), *Grammatical constructions: Their form and meaning*, 289-322. Oxford: Oxford University Press.

Vecchiato, Antonella. 2011. *Events in the grammar of direct and indirect causation*. PhD thesis, University of Southern California, Los Angeles, CA.

Veenstra, Tonjes. 2018. Serial verb constructions and pair merge. Paper presented at III GETEGRA International Workshop, Recife.

Veenstra, Tonjes. 2004. Unaccusativity in Saramaccan: The syntax of resultatives. In Artemis Alexiadou, Elena Anagnostopoulou & Martin Everaert (eds.), *The unaccusativity puzzle: Explorations of the syntax-lexicon interface*, 269-287. Oxford: Oxford University Press.

Veenstra, Tonjes. 1996. *Serial verbs in Saramaccan: Predication and Creole genesis*. Dordrecht: ICG Printing.

Veenstra, Tonjes & Pieter Muysken. 2017. Serial verb constructions. In Martin Everaert & Henk van Riemsdijk (eds.), *The Wiley-Blackwell companion to syntax*, 2nd edn, 1-51. Hoboken, NJ: Wiley-Blackwell.

Vergnaud, Jean-Roger. 1977/2008. Letter to Noam Chomsky and Howard Lasnik on 'Filters and control', April 17, 1977. In Robert Freidin, Carlos P. Otero & Maria L. Zubizarreta (eds.), *Foundational issues in linguistic theory*, 3-15. Cambridge, MA: MIT Press.

Verkerk, Annemarie & Benedicte Haraldstad Frostad. 2013. The encoding of manner predications and resultatives in Oceanic: A typological and historical overview. *Oceanic Linguistics* 52(1), 1-35.

Völkel, Svenja. 2017. Word classes and the scope of lexical flexibility in Tongan. *Studies in Language* 41(2), 445-495.

von Fintel, Kai. 2004. A minimal theory of adverbial quantification. In Hans Kamp & Barbara Partee (eds.), *Context-dependence in the analysis of linguistic meaning*. Amsterdam: Elsevier.

von Fintel, Kai. 1994. *Restrictions on quantifier domains*. PhD thesis, University of Massachusetts Amherst, MA.

von Prince, Kilu. 2019a. Counterfactuality and past. *Linguistics and Philosophy* 42(6), 577-615.

von Prince, Kilu. 2019b. Multiverb constructions at the syntax-semantics interface. Paper presented at Heinrich-Heine-University Düsseldorf.

von Prince, Kilu. 2017a. Daakaka dictionary. *Dictionaria* 1, 1-2171.

von Prince, Kilu. 2017b. Dozing eyes and drunken faces: Nominalized psycho-collocations in Daakaka (Vanuatu). *Studies in Language* 41(2), 502-520.

von Prince, Kilu. 2017c. Indefinites in Daakaka. In Vera Hohaus & Wanda Rothe (eds.), *Proceedings of TripleA 3: Fieldwork perspectives on the semantics of African, Asian and Austronesian Languages*, 126-137. Tübingen: University Library.

von Prince, Kilu. 2017d. Multi-verb constructions: Is there a continuum? Paper presented at the Workshop on Multi Verb Constructions: Semantic, Syntactic and Typological Perspectives (MVC2017), Humboldt-University of Berlin.

von Prince, Kilu. 2016. Alienability as control: The case of Daakaka. *Lingua* 182, 69-87.

von Prince, Kilu. 2015. *A grammar of Daakaka*. Berlin: de Gruyter Mouton.

von Prince, Kilu. 2013. Daakaka. *The Language Archive*. Nijmegen: Max Planck Institute for Psycholinguistics.

von Prince, Kilu. 2011a. On the Daakaka modal system: Imperatives and futures. Paper presented at the 10th International Conference on Tense, Aspect, Modality and Evidentiality (Chronos 10), Aston University, Birmingham.

von Prince, Kilu. 2011b. TAMP adjuncts in Daakaka: Reconsidering serial verbs and monoclausality. Paper presented at the International Workshop on the Languages of Vanuatu, Australian National University, Kioloa.

von Prince, Kilu & Anna Margetts. 2019. Expressing possibility in Daakaka and Saliba-Logea. *Studies in Language* 43(3), 628-667.

von Prince, Kilu, Ana Krajinovic, Anna Margetts, Valérie Guérin & Nicholas Thieberger. 2019. Habituality in four Oceanic languages of Melanesia. *Language Typology and Universals* 72(1), 21-66.

von Prince, Kilu, Ana Krajinovic, Manfred Krifka, Valerie Guérin & Michael J. Franjieh. 2018. Mapping irreality: Storyboards for eliciting TAM contexts. *Proceedings of Linguistic Evidence 2018*, 187-207.

von Stechow, Armin. 1996. The different readings of *wieder* ('again'): A structural account. *Journal of Semantics* 13(2), 87-138.

Wang, Ruoan. 2019. Fijian possessive classifiers as nominal Appl heads. Paper presented at the 42nd Generative Linguistics in the Old Word Conference (GLOW42), University of Oslo.

Washio, Ryuichi. 1997. Resultatives, compositionality and language variation. *Journal of East Asian Linguistics* 6(1), 1-49.

Wechsler, Stephen. 2005. Resultatives under the event-argument homomorphism model of telicity. In Nomi Erteschik-Shir & Tova Rapoport (eds.), *The syntax of aspect: Deriving thematic and aspectual interpretation*, 255-273. Oxford: Oxford University Press.

Wechsler, Stephen. 1997. Resultative predicates and control. *Texas Linguistic Forum 38: The syntax and semantics of predication*, 307-321.

Williams, Alexander. 2015. *Arguments in syntax and semantics*. Cambridge: Cambridge University Press.

Williams, Alexander. 2014. Agents in Mandarin and Igbo resultatives. In Audrey Li, Andrew Simpson & Dylan T. Wei-Tien (eds.), *Chinese syntax in a cross-linguistic perspective*, 270-299. Oxford: Oxford University Press.

Williams, Alexander. 2012. Objects in resultatives. Accepted with minor revisions to *Natural Language & Linguistic Theory*.

Williams, Alexander. 2009. Themes, cumulativity, and resultatives: Comments on Kratzer 2003. *Linguistic Inquiry* 40(4), 686-700.

Williams, Alexander. 2008. Word order in resultatives. *Proceedings of the 26th West Coast Conference on Formal Linguistics (WCCFL26)*, 507-515.

Williams, Edwin. 2014. Derivational prefixes are projective, not realizational. In Peter Svenonius (ed.), *The cartography of syntactic structures, vol. 9: Functional structure from tip to toe*, 290-316. Oxford: Oxford University Press.

Williams, Edwin. 1978. Across-the-board rule application. *Linguistics Inquiry* 9, 31-42.

Wilson, Salainaoloa. 2010. *Le tofi ne‘i vale tu‘ulima: Perceptions of Samoan students, teachers, and parents on the place of the Samoan language in New Zealand today*. MA thesis, Victoria University of Wellington.

Wiltschko, Martina. 2006. On 'ergativity' in Halkomelem Salish. In Alana Johns, Diane Massam & Juvénal L. Ndayiragije (eds.), *Ergativity: Emerging issues*, 197-227. Dordrecht: Springer.

Wittek, Angelika. 2011. *Learning the meaning of change-of-state verbs: A case study of German child language*. Berlin: Mouton de Gruyter.

Wolff, Phillip. 2003. Direct causation in the linguistic coding and individuation of causal events. *Cognition* 88(1), 1-48.

Wood, Jim. 2015. *Icelandic morphosyntax and argument structure*. Dordrecht: Springer.

Wood, Jim. 2011. Icelandic let-causatives and case. *Working Papers in Scandinavian Syntax* 87, 1-52.

Wood, Jim & Alec Marantz. 2017. The interpretation of external arguments. In Roberta D'Alessandro, Irene Franco & Angel J. Gallego (eds.), *The verbal domain*, 255–278. Oxford: Oxford University Press.

Woolford, Ellen. 2008. Differential subject marking at argument structure, syntax and PF. In Helen de Hoop & Peter de Swart (eds.), *Differential subject marking*, 17-40. Dordrecht: Springer.

Woolford, Ellen. 1997. Four-way case systems: Ergative, nominative, objective and accusative. *Natural Language & Linguistic Theory* 15(1), 181-227.

Wozna, Beata & Theresa Wilson. 2005. *Seimat grammar essentials*. Ukarumpa: Summer Institute of Linguistics.

Wreen, Michael. 1987. Two 'by' ways. *Analysis* 47(2), 120-124.

Wunderlich, Dieter. 1997. Cause and the structure of verbs. *Linguistic Inquiry* 28(1), 27-68.

Yu, Kristine M. to appear. Tonal marking of absolutive case in Samoan. *Natural Language & Linguistic Theory*,

Yu, Kristine M. 2011. The sound of ergativity: Morphosyntax-prosody mapping in Samoan. *Proceedings of the 39th Annual Meeting of the North East Linguistic Society (NELS39/2)*, 825-838.

Yu, Kristine M. & Edward Stabler. 2017. (In)variability in the Samoan syntax/prosody interface and consequences for syntactic parsing. *Laboratory Phonology*, 8(1), 25, 1-44. doi: 10.5334/labphon.113

Yuan, Michelle. 2018. *Dimensions of ergativity in Inuit: Theory and microvariation*. PhD thesis, Massachusetts Intstitute of Technology, Cambridge, MA.

Zeller, Jochen. 2001. *Particle verbs and local domains*. Amsterdam: John Benjamins.

Zhang, Niina N. 2007. A syntactic account of the Direct Object Restriction in Chinese. *Language Research* 43(1), 53-75.

Zimmermann, Malte. to appear. Verbal number in Chadic - with special reference to Hausa. In Jenny Doetjes & Patricia Cabredo-Hofherr (eds.), *The Oxford handbook on grammatical number*. Oxford: Oxford University Press.

Zimmermann, Malte. 2017. Find construction analyze: Making sense of serial verb constructions. Paper presented at Workshop on Multi Verb Constructions: Semantic, Syntactic and Typological Perspectives (MVC2017), Humboldt-University of Berlin.

Zimmermann, Malte. 2007. Overt existential closure in Bura (Chadic). *Proceedings of the 17th Semantics and Linguistic Theory Conference (SALT 17), 333-350.*

Zimmermann, Malte & Mary Amaechi. 2020. One, but not the same: The event semantics of argument sharing SVCs in Igbo. Ms., University of Potsdam.

Zlatev, Jordan & Peerapat Yangklang. 2004. A third way to travel: The place of Thai in motion-event typology. In Sven Strömquist & Ludo Verhoeven (eds.), *Relating events in narrative, vol. 2: Typological and contextual perspectives*, 159-190. Mahwah, NJ: Erlbaum.

Zuraw, Kie, Kristine M. Yu & Robyn Orfitelli. 2014. The word-level prosody of Samoan. *Phonology* 31(2), doi: 10.1017/S095267571400013X.